INTERNAL STRUCTURE OF

VERB MEANING

A Study of Verbs
in Tamazight (Berber)

By KARIM ACHAB

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CAMBRIDGE SCHOLARS

PUBLISHING

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This book first published 2012

Cambridge Scholars Publishing

12 Back Chapman Street, Newcastle upon Tyne, NE6 2XX, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN (10): 1-4438-3751-2, ISBN (13): 978-1-4438-3751-4

To Numide, Tanite and Aksel

"You can fool some of the people all the time,
And all the people some of the time,
But you cannot fool all the people all the time."
—Abraham Lincoln

A few quotes about Tamazight and Imazighen (Berbers):

"The Amazigh tribes no longer exist"
"Whoever wants to use Tamazight at home is free but this must end"
"If your mother transmits you this language [Tamazight], she nourishes you with the milk of the colonialist, she feeds you their poison"
(Muammar Gaddafi, former head of Libyan State)

"Never ever will Tamazight become an official language alongside Arabic"
(Abdelaziz Bouteflika, President of Algeria to the Amazigh population of Kabylia)

"Arabic is the official language of our identity, our Koran and our nation. The Moroccan citizen is duty-bound to speak his national language."
(Khalid Shebal, Moroccon's Institute for Arabization)

"To the Apaches of Nador, Al Hoceima, Tetouan [...] they will be treated with the most cruel treatment."
(Hassan II, former king of Morocco to the Amazigh population of the Rif region)

"The old Berber ghost wants to come back to life"
(Habib Bourguiba, first President of Tunisia)

(Quotes gathered and translated by Ines El-shikh)

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PREFACE

This book is derived from my Ph.D. dissertation defended at the University of Ottawa in 2006, under the supervision of Professor Maria Luisa Rivero. Chapter 2, entitled "Tamazight Language Profile", is an addition that aims to provide readers linguistic knowledge and facts about the language as well as to help situate the reader with respect to the political environment where Tamazight is evolving. It also retells the history of Tamazight and Imazighen (Berbers). This chapter is illustrated with maps situating the different Tamazight varieties spoken today across North Africa. While the central topic of investigation in the present book remains the internal structure of verb meaning in Tamazight, it is written in such a way that it serves as an introduction to lexical semantics. The aim of this approach is to describe how lexical semantics interacts with syntactic rules before and after spell-out in a way that incorporates both the Minimalist Program and the Government and Binding theories.

Chapter 3, entitled "The Organization of the Grammar", clears out the confusion found in the literature between event, lexical and aspectual structures and traces the origin and the evolution of the concept related to these structures from Plato to modern linguistics. The chapter also untangles interwoven theoretical facts regarding the different levels at which event structure, lexical structure and predicate-argument structure are derived and how they are "mapped" together.

What makes the Tamazight facts investigated in this book so unique is the possibility for a special category of stative verbs to show up with accusative clitics or with nominative clitics. While these verbs are argued to be a vestige of nominal declension (Galand 1980, 1990), I demonstrate that these are the only verbs that contain the stative abstract verb BE. This serves as the basis for the derivation of other types of verbs by augmentation. The approach adopted in this book provides an original account that is coherent and that incorporates all other verb classes.

ACKNOWLEDGEMENTS

I would like to thank Professor Rivero for the trust she put on me, her patience and her advice while I was conducting this research in the form of a PhD dissertation, at the University of Ottawa, under her supervision. The research was carried out with financial support from several SSHRC Research Grants to Professor Maria Luisa Rivero and from both the Department of Linguistics and the School of Graduate and Postdoctoral Studies of the University of Ottawa.

LIST OF ABBREVIATIONS OR CHRONOLOGY

Acc	accusative
AZK	At Ziyan Kabyle Tamazight (Berber)
Caus	causative
CL	clitic
Cs	Construct state
EPP	Extended Projection Principle
ES	Event Structure
F	feminine
Fs	Free state
GB	Government and Binding Theory
LS	lexical structure
M	masculine
Nom	nominative
Perf	perfective
PAS	predicate-argument structure
Pl	plural
Sg	singular

CHAPTER ONE

OUTLINE OF THE BOOK

1.1 Main objective

The main objective of the present book is twofold. On one hand, I investigate the internal structure of verb meaning and its role in predetermining the predicate-argument structure (PAS) in the syntax. On the other hand, I outline a model of the organization of the grammar specifying the levels at which the different subcomponents of both the internal and the predicate-argument structures are represented. Once such a model is articulated, I explain how it is applied to account for the derivation of the different verb classes considered in the present book. I assume the internal structure of verbs to be composed of two main subcomponents which, following the tradition in the linguistic literature is referred to as event structure (ES) and lexical-conceptual structure (LCS) or lexical structure (LS) for short. The verb classes investigated are those indicating state and change of state in Kabyle Tamazight[1]. However, other regional varieties as well as comparison with equivalent verbs in English and French will also be appealed to where necessary. The verbs of state and change of state considered include the class of intransitive verbs traditionally referred to as verbs of quality in the linguistic literature on Tamazight (chapter 4), unaccusative verbs (chapter 4), verbs of spatial configuration (chapter 6) and causative verbs, both lexical and morphological (chapter 7).

1.2 The internal structure of verbs and the organization of the grammar

As will be discussed in Chapter 3, there is a significant confusion in the linguistic literature with regard to the representation and the terminology used to refer to the internal structure of verbs. For instance, the same representations are alternately called lexical-conceptual structures

1. A full description of the Tamazight language is provided in chapter 2.

(Jackendoff 1976, 1983, 1990; Guerssel 1987; Rappaport and Levin 1996 among many others) logical structures (Dowty 1979); event structures (Pustejovsky 1988, 1991, 1995); lexical cores (Pinker 1989) and Event templates (Rappaport and Levin 1998). Moreover, while some authors suggest that the lexical-conceptual structure is pre-syntactic[2]and therefore represented at a lexical level, others argue that it is derived in the syntactic component[3]. In addition to these two alternative views, other authors[4] take an intermediate stand arguing that event structure is relevant to both levels. It is one of my commitments in the undertaken study to curb these ambiguities. To achieve such a goal, I argue that event structure is not part of the lexical knowledge corresponding to verbs but a mental representation of events happening in the external world. These mental representations are established from experience or memorized as conceptualized mental schemas by the language learner. By contrast, lexical structure is part of the speaker's lexical or encyclopaedic knowledge[5]. Accordingly, the organization of the grammar has to contain at least two distinct presyntactic levels, only one of which is lexical while the other is conceptual. Conversely, Argument structure, as will be demonstrated, is projected into the syntactic component on the basis of the lexical structure which is already established in the lexical knowledge of the language user. However, the predicate-argument structure is subject to further computation or transformation in the syntax following the syntactic rules of the language.

On the basis of the different verb classes of (change of) state investigated in the present study, I demonstrate that lexical structures are concatenative in the sense that they may be augmented or reduced depending on the composition of the event structure being considered. If used frequently enough, such lexical structures end up being "fossilized" in the user's mental lexical knowledge or encyclopedia. The verbs of (change of) state investigated in the present study share the common property of indicating a state which is either inherent or comes up as the result of an event. Accordingly, it is legitimate to expect this notion of state to be reflected in some way within the lexical structure. Following a

2. Jackendoff (1976 1983, 1990); Hale and Laughren (1983); Hale (1986); Guerssel (1987); Rappaport and Levin (1986, 1996, 1998 and subsequent work); Pustejovsky (1988, 1991, 1995); Pinker (1989) among many others

3. Ritter and Rosen (2000); Borer (1994, 1996); Benua and Borer (1996); Tenny (1987, 1994) and Ritter & Rosen (2000) among others.

4. For instance Van Hout (2000) and Travis (2000)

5. This view is endorsed in the literature by Jackendoff (1983, 1990) and Pinker (1989).

long established tradition in lexical semantics, I indicate this notion of state at the lexical-structure level by means of the upper case verb BE in the present book. However, BE here is to be understood as merely notational, indicating an abstract verb archetype[6] rather than a lexical verb. I demonstrate through the different chapters that the lexical structure of these verbs first starts up with a basic stative verb and builds up progressively using other abstract verb archetypes as building blocks. These abstract verbs reflect the semantic functions such as "(be)coming", "acting", and "causing" which are encoded in the event being described. Again, following the well established tradition in lexical semantics, I paraphrase such abstract verb archetypes as (BE)COME, ACT and CAUSE, etc. In addition to verb archetypes, a lexical structure also contains a lexical root which confers the lexical meaning to the verb. I use the mathematical symbol[7] √ to indicate this root concept in conformity with the by now well-established tradition in lexical semantics. One way of illustrating the concatenative nature of the internal structure of the verbs under investigation is by using the familiar syntactic bracketing system as shown below:

(1.1)

a. Stative verbs of quality
$[_{State}$ BE ($[\sqrt{ROOT}]$)]

b. Inchoative verbs of quality and unaccusative verbs
$[_{Event}$ COME $[_{State}$ BE ($[\sqrt{ROOT}]$)]]

c. Verbs of spatial configuration (or unaccusative-disguised reflexives)
$[_{Event}$ ACT $[_{Event}$ COME $[_{State}$ BE ($[\sqrt{ROOT}]$)]]]

d. Causative verbs
$[_{Event}$ CAUSE $[_{Event}$ COME $[_{State}$ BE ($[\sqrt{ROOT}]$)]]]

6. For reasons that will be clear as we proceed I call these internal abstract verbs archetypes in the sense that their semantics is inherited although morphologically hidden. My use of this term was inspired from Jungian psychology.

7. The use of the symbol √ in linguistics to indicate lexical roots is by now widespread (see Pesetsky 1995; Marantz 1997; and Hale and Keyser 1998 and 2002 among many others.)

I further argue in subsequent chapters that the lexical structures above are then mapped onto their equivalent event structures yielding their corresponding predicate-argument structures in the syntax. A further discussion of the internal structure and model of the organization of the grammar is provided in Chapter 3. Having given an overview of the internal structure and the PAS and how they fit into the organization of the grammar, let me now introduce the verbs of (change of) state investigated in this study.

1.3 Verbs of (change of) state

In this section I introduce the different verb classes investigated in the undertaken study and the way I envision their internal structure along the lines revealed in the previous section. As already mentioned above, all these verb types share the common semantic particularity to refer to a state or a change of state. They include the class of intransitive verbs traditionally referred to as verbs of quality in the linguistic literature on Tamazight (§ 3.1), unaccusative verbs (§ 3.2), verbs of spatial configuration (§ 3.3), and causative verbs, both lexical and morphological (§ 3.4).

1.3.1 Verbs of quality

The main morpho-syntactic characteristic of verbs of quality as they occur in Taqbaylit (Kabyle) Tamazight resides in their possibility to combine with both accusative and nominative clitics. These two possibilities are illustrated with the verb[8] *ZWΓ*[9]'be red' below[10]:

(1.2) a. Combination of the verb *zwγ* 'be red' with an acccusative clitic
Zeggaγ-it
Red.perf-3m.sg.acc.
It / he is red

8. For reasons of clarity, verbs are announced in their root form, stripped of all their morphological augments.
9. The symbol *Γ* is the uppercase of the Greek letter γ (gamma), which is used the velar sound.
10. Unless specified otherwise, the verbs of quality exemplified in the present dissertation are from the At Ziyan Kabyle variety spoken in the eastern part of Kabylia. A description of this variety is provided by Allaoua (1986). See also Galand (1980, 1990).

b. Combination of the verb *zwγ* 'be red' with a nominative clitic
I-zwiγ
3m.sg.nom.-red.perf
It / he has become red

Both verb stems *zeggaγ* in (1.2a) and *zwiγ* in (1.2b) are derived from the same lexical root √zwγ. The sound indicated as *gg* in the form *zeggaγ* (1.2a) is simply the reduplication of the labial sound *w*, thus obeying a phonological rule in this language. The form *zeggaγ* (1.2a) always indicates a pure state, while the form *zwiγ* illustrated in (1.2b) may indicate either a resultative state or a change of state depending on the context. In view of this difference, I term the form in (1.2a) pure stative and the one in (1.2b) inchoative. This terminology is semantically grounded. In the same manner, I will appeal to syntactically grounded terminology and term the form in (1.2a) accusative because it shows up with an accusative clitic and the one in (1.2b) nominative as it shows up with a nominative clitic. A point to note here is that the possibility of verbs of quality to combine with accusative clitics as shown in (1.2a) is a counter example to the standard idea in Government and Binding that intransitive verbs lack the ability to assign accusative Case as was argued for by Burzio (1986). A number of questions arise at this point. For instance, how do we account for the different interpretations associated with the same verb form in (1.2b) such as the stative and the inchoative (change of state)? Another question that needs to be addressed with respect to this data has to do with the reason for why the internal argument in (1.2a), expressed with the accusative clitic, is not attracted to the nominative position. These and other relevant questions are dealt with in Chapter 4.

It is noteworthy that the accusative form (1.2a) exists only in a few varieties of Tamazight among which Kabyle is one of. In most other varieties of Tamazight, only the nominative form illustrated in (1.2b) is available. Galand (1980, 1990) argues that the accusative form (1.2a) is a remnant of an old nominal declension system that has progressively evolved into a verbal inflectional system. In the terminology adopted here, we can say that the system has evolved from accusative to nominative. In some varieties, this evolution is complete. This is for instance the case in Tashelhiyt, a variety of Tamazight spoken in Southern Morocco, as shown below:

(1.3) I-zeggaγ
3m.sg.nom.-red
It / he became red

The form *i-zeggaγ* in (1.3) shares the prefix property with the Kabyle nominative form *i-zwiγ* in (1.2b), while its verb stem *zeggaγ* is identical to the accusative form in (1.2a). How are these facts accounted for? To the best of my knowledge, the questions seen here have never been addressed in the linguistic literature on Tamazight. They are dealt with in Chapter (4) along with other related questions.

1.3.2 Unaccusative verbs

The nominative form of verbs of quality introduced in the previous subsection contrasts with unaccusative verbs such as *rγ* 'burn' exemplified with in (1.4):

(1.4) I-rγa wexxam
3m.sg.-burn cs.house
The house has burned down

Like the nominative form *i-zwiγ* (1.2b), the unaccusative verb *i-rγa* (1.4) appearsup with the nominative suffix clitic *i-*. However, unlike the nominative verb *i-zwiγ* in (1.2b), the unaccusative verb *i-rγa* in (1.4) lacks the possibility to combine with the accusative clitic. I argue in Chapter 4 that the reason why this is so has to do with the semantic content of this type of verb in the sense that they do not refer to an inherent property or state of the (internal) argument but to a property that always results from change of state. Remember from the previous section that the unaccusative form indicates a pure state as opposed to the nominative form which may also indicate a change of state.

Another interesting fact with respect to the unaccusative class of verbs such as the one illustrated in (1.4) is their behavior with respect to the intransitive/transitive alternation. Indeed, while a subclass of unaccusative verbs possess a transitive alternate, another subclass, which includes the verb *rγ* 'burn' (1.4), does not. This issue, which I refer to as split unaccusativity, is further introduced in the next subsection.

1.3.2.1 Split unaccusativity

The class of unaccusative verbs in Tamazight may be split into two subclasses depending on whether they have a causative alternate or whether their causative counterpart is derived by means of the causative morpheme *SS*[11]. For instance, the verb rγ 'burn' exemplified in (1.4) does not possess a transitive alternate[12] as shown in (1.5) below:

(1.5) *I-rγa Hemmu axxam-is
3m.sg.-burned house-his
Hemmu burned his house

Unlike the verb exemplified in (1.4) and (1.5), the unaccusative verb *ldi* 'open' exemplified in (1.6a) does have a transitive alternate as shown in (1.6b):

(1.6) a. T-ldi tewwurt
3f.sg.open cs.door
The door is open / opened

b. I-lli Aksel tawwurt
3m.sg.open-perf. Aksel fs.door
Aksel opened the door

The question that arises here is why some unaccusative verbs alternate with the causative use as in (1.6) while others cannot as shown in (1.5). This question is dealt with in Chapter 4, which is devoted to unaccusative verbs.

1.3.3 Verbs of spatial configuration

The different intransitive verb classes introduced in the previous sections contrast with verbs of spatial configuration such as *qqim* 'sit', *bedd*

11 Causative verbs will be introduced in **§** 3.4.

12 However, the transitive equivalent of the intransitive rγ may be derived by means of the causative morpheme *SS* inserted between the pronominal morpheme i- and the verb stem as shown below.

I-sserγ Hemmu axxam-is
3m.sg.-burn house-his
Hemmu burned his house

'stand', *kker* 'stand up', *knu* 'lean, bend', etc. Indeed, while the former class may have a maximum of only two interpretations, namely the pure stative and the inchoative (change of state), verbs of spatial configuration may have up to three different interpretations. That is, in addition to the two previously mentioned interpretations, these verbs may also yield an agentive interpretation depending on the context. As will be seen in Chapter 6, these three distinct interpretations are similar to those identified by Levin and Rappaport (1995) as (i) *simple state position*, (ii) *maintain position* and (iii) *assume position*. Therefore, this semantic property singles out this class of verbs from the verbs of quality and the unaccusative class introduced in the previous sections. This justifies why they are treated separately in Chapter 6 where I argue in favor of the following triadic lexical structure:

(1.7) $[V^{ACT} [V^{COME} [V^{BE} ([\sqrt{}ROOT])]]]$

In Chapter 6 I also compare the Tamazight verbs of spatial configuration with their French equivalents. In French, spatial configuration verbs such as *s'asseoir* 'sit down', *se lever* 'stand up, get up', *se pencher* 'to lean', etc display the reflexive pronoun *SE*. I argue that the nature of verbs of spatial configuration in Tamazight is better understood when they are analyzed as disguised reflexives rather than as unaccusatives despite their lack of reflexive morphology. Accordingly, I demonstrate that this class of verbs in Tamazight has the same internal structure and the same predicate-argument structure as their equivalents in French which display reflexive morphology. Drawing inspiration from Alboiu *et al.* (2004), I further maintain that the differences between this class of verbs in Tamazight and their equivalents in French originate at the post-syntactic level, i.e. after Spell-Out.

1.3.4 Causative verbs

In the present section I introduce Tamazight causative verbs which induce a change of state. We need to keep in mind two types of distinctions with respect to this broad class of verbs. On the one hand, as briefly mentioned in the previous section, we need to distinguish lexical causatives ((1.8b) below) from morphological causatives ((1.9b) below). On the other hand, lexical causatives split into two categories, those which alternate with the intransitive use ((1.8) below) and those which do not ((1.10) below)

1.3.4.1 Lexical vs. morphological causatives

Tamazight has two types of causative verbs. One type, exemplified in (1.8), alternates with the intransitive use; the other type, illustrated in (1.9), is derived by means of the causative morpheme *SS*.

(1.8) a. T-lli tewwurt
3f.sg.open cs.door
The door is open / opened

b. Y-lli Aksel tawwurt
3m.sg.open-perf. Aksel fs.door
Aksel opened the door

(1.9) a. T-wwa lqahwa
3f.sg. cook coffee
The coffee is ready

b. Y-ss-ww Aksel lqahwa
3m.sg-caus-make Aksel coffee
Aksel has made (some) coffee

Following the tradition in linguistics I call the causative type in (1.8b) lexical and the one in (1.9b) morphological. I argue in Chapter 7 that the structure of the intransitive alternate in (1.8b) is derived by reducing its causative counterpart. By contrast, I argue that the lexical structure of morphological causatives such as the one in (1.9b) is derived by augmenting its intransitive counterpart.

1.3.4.2 Alternating vs. non-alternating lexical causatives

Lexical causatives do not behave coherently. Causatives which alternate with the unaccusative use such as the one in (1.8) above contrast with another type of lexical causatives which lack the intransitive alternate as illustrated with the verb *nγ* 'kill' in (1.10):

(1.10) a. Y-nγa wemcic aγerda
3m.sg-kill.perf cs.cat fs.rat
The cat killed the rat

b. *Y-nγa uγerda
3m.sg-kill.perf cs. rat
*The rat killed

I demonstrate in Chapter 7 that the lexical structure associated with the non-alternating causative *nγ* 'kill' in (1.10a) has a different resultative state subcomponent from the one associated with the lexical structure of the causative-unaccusative alternating verb *lli* 'open' in (1.8a). In particular, I argue that the √ROOT involved in the lexical structure of the verb *nγ* 'kill' (1.10a) conflates with the abstract verb archetype CAUSE at the lexical-conceptual level. In contrast, I further argue that the √ROOT involved in the lexical structure of the intransitive-alternating causative verb *lli* 'open' in (1.8a) conflates with the abstract verb archetype BECOME. This will be shown to explain the differences between these two types of causatives.

1.3.4.3 Cross-language differences

Causative verbs behave differently across languages. In Kabyle Tamazight the verb *bnu* 'build' alternates between the transitive and the intransitive use as shown in (1.11), while its English equivalent *build* is restricted to the transitive use as shown in (1.12):

(1.11) a. Y-bna Aksel axxam
3m.sg-build.perf. Aksel fs.house
Aksel built a house

b. Y-bna wexxam
3m.sg.build.perf. cs.house
The house is built

(1.12) a. John built the house

b. *The house built

I argue in Chapter 7 that the Tamazight verb *bnu* and its English equivalent *build* differ with respect to their lexical structures. This explains why the Tamazight verb has an unaccusative alternate while its counterpart in English is restricted to the causative use. Having introduced the main objectives and the primary verb classes to be investigated in this paper, let me now provide a brief description of Tamazight. Tamazight is

the main language considered in the present study, although discussions of English and French verbs are provided where appropriate for reasons of comparison.

CHAPTER TWO

TAMAZIGHT LANGUAGE PROFILE

2.1 Geographical area where Tamazight is spoken

As mentioned in the previous chapter, the main language investigated in the present study is Tamazight, more specifically the Kabyle (or Taqbaylit) variety. This variety is spoken in a region of Algeria traditionally called *Tamurt n Leqbayel* by its inhabitants (literally the "Country of the Kabyles"). In Western languages however, the Tamazight language is better known by the name of Berber, while the names *Taqbaylit* and *Tamurt n Leqbqyel* are called Kabyle and Kabylie (or Kabylia)respectively.

Fig 2-1 Administrative departments that constitute the region of Kabylia, with recently arabicised area shown in shade

Tamazight is the language spoken by the Amazigh, who are the indigenous people of North Africa. This language was once spoken all over the area stretching from the Oasis of Siwa (in western Egypt) to the Canary Islands all the way through Morocco, Algeria, Tunisia and Libya. It was also spokenfrom the northern coast of the Mediterranean Sea all the way south

to Mauritania, Mali and Niger. Although still spoken in its various regional forms in all the aforementioned countries with the exception of the Canary Islands, Tamazight has now lost a lot of ground to local varieties of Arabic. This latter language was introduced into North Africa along with the Islamic religion as a consequence of successive military conquests by Islamic armies from Middle Eastern countries belonging to different dynasties. Although the first incursions go as far back as the 7th century, the process of massive Arabicization did not start then but much later, around the 10th and 11th century[1]. The association between Islam and the Arabic language of course played a substantial role. Beyond the fact that Tamazight remained exclusively oral, that is, without any substantial written tradition, Arabic was more highly valued both for its supposedly sacred status and its written tradition. The reasons that led the native population to adopt the newly arrived religion are as diverse as they are numerous, and we cannot cover them all here as they fall out of the scope of the present study. Islamic conversion became almost synonymous with language and cultural Arabicization, which transformed the Berber speaking population into a linguistic minority. Over time, with a fading of identity awareness along with the loss of language, the Arabo-Islamic ideology transformed this linguistic partition into an ethnic partition without the Arabicized population discerning it. As a consequence, the area where Tamazight is spoken today is not contiguous but is constituted of islands that are distant from one another and disrupted by large Arabicized zones. Tamazight has somehow survived in naturally "protected" zones, which were mostly mountainous or desert areas. Lack of contact between such distant areas has favored the process of dialectalization to a substantial degree. However, the nature of dialectal variation is more phonological and lexical than syntactic.

It is difficult to put forward any number estimating the Tamazight-speaking population today because no census taking this question into consideration has ever been made in any country in North Africa. Chaker (1989, 1990) evaluates the number of Tamazight speakers somewhere between 7 and 8 million in Algeria (± 25 % of the Algerian population) and around 10 million in Morocco (35 to 40 % of the Moroccan population). However, the author does not provide the source of these figures nor does he specify in what manner he has obtained them. For this reason, we are only indicating the areas where Tamazight is spoken in its different local varieties.

1. (See Ibn Khaldun 1927; André Julien 1951; W. Marçais 1932; Guatier 1937; Courtois 1942; G. Marçais 1946; Camps 1983, 1995; Brett and Fentress 1996)

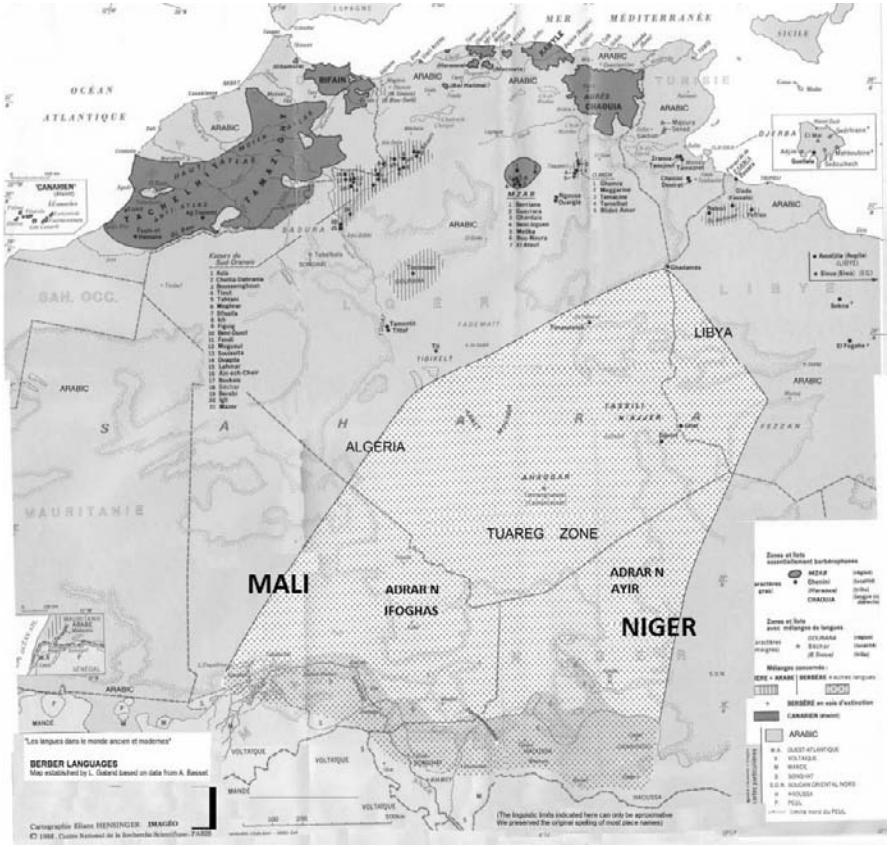


Fig 2-2: *Tamazight-speaking areas* (map reproduced/adpted from D. Cohen (1988). In: Perrot, J. and D. Cohen (Ed.) Les langues dans le monde ancien et moderne. Vol.3, Langues chamito-sémitiques. Paris : CNRS.

Morocco: There are three important Tamazight-speaking areas in Morocco. The variety spoken in the Riffian mountainous area (including Ayt Werrayghel, Beni Zennasen, El Hoceima, etc.) is referred to as Tarifit. This variety also includes the form spoken in Melilla and Ceuta, two enclaves located in the Riffian area which belong to Spain. Heading south, we come across another important Tamazight-speaking area in central Morocco, stretching all along the mountainous Middle Atlas zone. Further south and west is the domain of another variety, referred to as Tachelhit, occupying the Anti-Atlas mountain area and the plains from Sous, stretching from Agadir

down to Ifni on the western coast, and going as far east as the Draa. The High Atlas Mountains somehow represent an intermediate area between the domains of central Moroccan Tamazight and Tachelhit.

Algeria: The Tamazight-speaking zones in Algeria are less homogenous than in Morocco. Starting from the north, Kabylia represents one of the most important areas where the language is still in use. This is also the area where linguistic and cultural awareness has been developed to a high extent among the population. The Kabylia region contains four full administrative departments: Tizi-Ouzou, Bgayet (or Bejaia), Bouira and Boumerdes, although there are some parts in the two latter departments affected by the Arabicization process. Kabyle Tamazight is also in use in another department, Setif, which borders Bgayet, and more precisely in At Wartilen, Bougaa and the surrounding areas. It is also spoken in the Chenoua region, from Cherchel to Tipasa, located in another department (Tipasa) and, as one heads south, in Haraoua, Metmata and Bel Halima, situated west of Algiers.

The next important area where the Tamazight language is spoken which we come across as we head southwest from Kabylia is another mountainous region bordering Tunisia called Aures (Batna, Khenchla, Oum El Bouaghi, Biskra, Tebessa and Souk Ahras). The variety spoken there is locally referred to as 'Tachawit'. In addition to the areas described above, other local varieties of Tamazight are spoken in many other linguistic islands scattered in different areas such as the south Oranian region, called the Mountains of the Ksours, close to the Algero-Moroccan borders (Ain Ssefra, Figuig, Bechar, etc.) and Algerian Sahara (Mzab, Tougourt, Gourara and Touat and Tidikelt). Further south is the land of the Tuareg, a desert area which stretches into Mali and Niger.

Land of the Tuareg: The Tuareg are among the few Amazigh people to have retained the name Tamazight, which as we said earlier is the original name of the language. However, it is sometimes phonologically altered to Tamachaq, Tamajaq or Tamahaq depending on the area. Accordingly, the people refer to themselves as *Imuhagh / Imuchagh / Imujagh*, meaning 'Amazigh people' or as *Kel Tmajaq / Tmachaq / Tmajaq*, meaning the people belonging to (speaking) the Tamazight language.

Among the areas where the Tuareg people live are the Hoggar and Tasili n Ajjer (in Algeria), and in the mountainous zones of Ayir (in Mali) and Ifoghas (in Niger). The land of the Tuareg also includes an important part in southern Libya, the zone stretching from Ghat to the vicinity of the Fezzan region, as well as some smaller zones in Mauritania and Senegal.

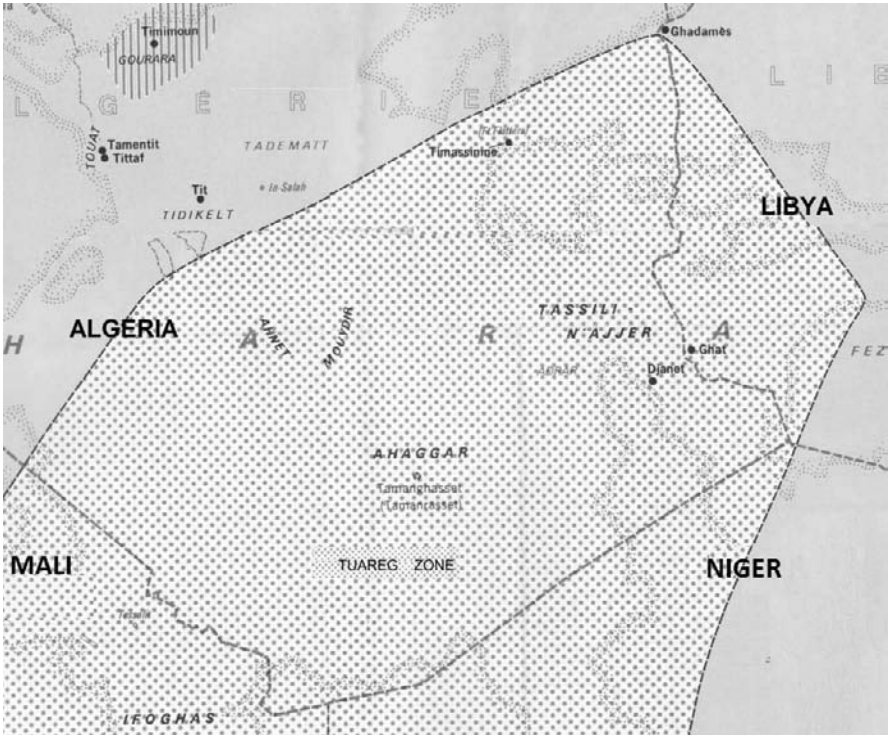


Fig 2-3: The land of the Tuareg overlapping with four countries (map reproduced/adpted from D. Cohen (1988). In: Perrot, J. and D. Cohen (Ed.) Les langues dans le monde ancien et moderne. Vol.3, Langues chamito-sémitiques. Paris : CNRS.

Libya: In addition to the Tuareg zone mentioned previously, there are three more distinct zones where Tamazight is spoken in Libya . Starting from the west, the zone called Ghadames, close to the southern Tunisian borders, is almost the continuation of the Ghat, yet it possesses a different dialectal variety. The other zones in Libya include Nalut and Yefren in the Nefousa mountain area in the north, close to the southern border of Tunisia; Zouara on the north litoral; Sokna, and El Fokaha and Awdjila in the east. In the post-Gaddafi era, Imazighen (Berbers) of Libya are determined to make their voice heard by the new authorities by asking that their language be granted official and constitutional status.

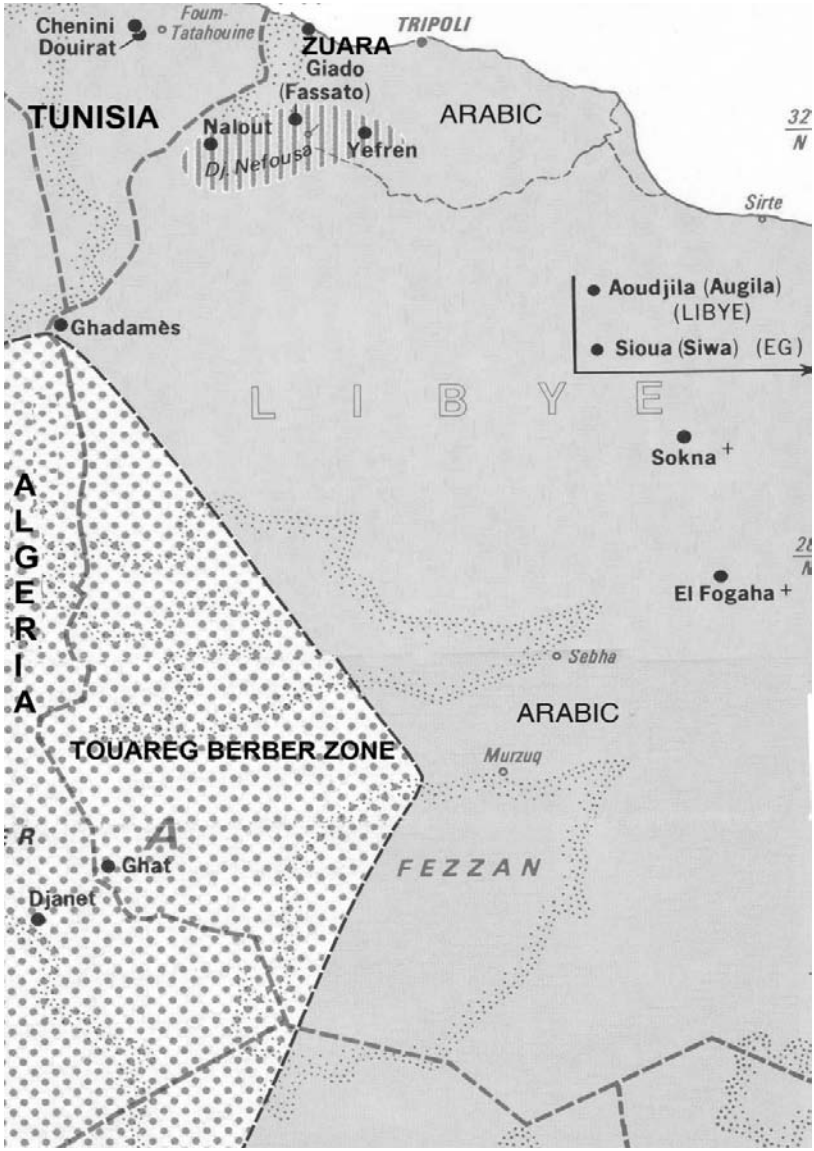


Fig 2-4: Tamazight speaking zones in Libya (map reproduced/adpted from D. Cohen (1988). In: Perrot, J. and D. Cohen (Ed.) Les langues dans le monde ancien et moderne. Vol.3, Langues chamito-sémitiques. Paris : CNRS.

According to some claims, Tamazight became extinct in Soknah. However, the Ethnologue reports that it was still spoken by some 5.600 speakers in 2006.

Tunisia: Tamazight is spoken in at least six villages located in the Ksours region, such as in Ghoumarassen, a village located about 300 km from Tunis, stretching south to Majora, Sened, Matmata, Zrawa, Taoujout, Tamezret, Chenini, Douirat and Foum Tatawin, as well as in the island of Djerba.

Unfortunately, the Tunisian government has always adopted strategies that ultimately force the inhabitants of these areas to leave. As a result, Arabic-speaking investors take over the most touristic places, while the Amazigh move to already Arabicized areas. Below are a few examples from a Twitter user who was originally an Amazigh from Tunisia that illustrates the former President Ben Ali's Tunisia's anti-Amazigh policy (tweeted on January 1, 2012)

Fig 2-5: Tamazight speaking zones in Tunisia (map reproduced/adpted from D. Cohen (1988). In: Perrot, J. and D. Cohen (Ed.) Les langues dans le monde ancien et moderne. Vol.3, Langues chamito-sémitiques. Paris : CNRS.

Egypt: the Oasis of Siwa is the only zone where Tamazight is spoken in Egypt. The contact between Egyptians and the Amazigh people goes as far back as before 950 B.C. By that date, after the Pharaoh Psousenness II had died, an Amazigh called Sheshonq I became the Pharaoh of Egypt and ruled from (945-924 B.C.). Sheshonq I, the founder of the 22nd dynasty, established his capital city in Bubastis. His dynasty lasted 191 years before it came to an end shortly after the death of Sheshonq V (767-730 BC). By that time, the Amazigh dynasty had many difficulties and Osorkon IV, the son who succeeded Sheshonq V, was restricted to his home city Tanis and the dynasty's capital Bubastis. Three millennia later, the Amazigh presence in Egypt is still maintained by the small Oasis of Siwa where the most eastern variety of the Tamazight language is still in use.

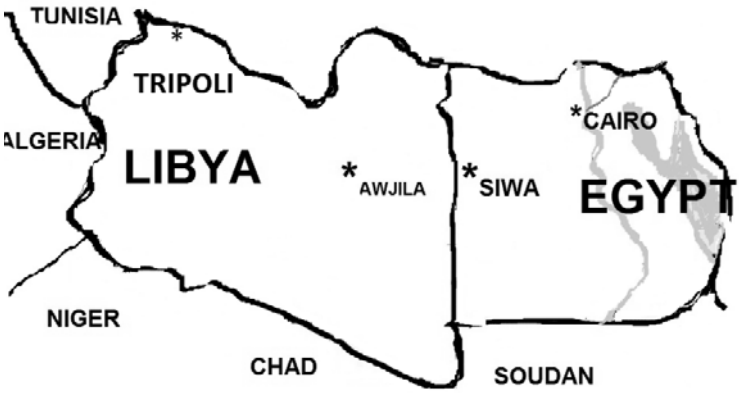


Fig 2-6: Location of the Oasis of Siwa in Egypt, a Tamazight speaking zone.

2.2 Ideological and political threat: the case of Algeria

In all of the above mentioned countries, the Tamazight language is facing an extremely politically hostile environment. To understand the hostility of the political environment in which Tamazight has evolved, let me highlight the example of Algeria. For reasons related to space and time, I will not extend the discussion to other countries or areas.

In the aftermath of Algerian independence, the first constitution drafted by the National Liberation Front (FLN) in 1963 which was supposedly approved by referendum officially declared Arabic as the only official and national language (article 5). It also stated that Algeria is an integral part

of the Arab Maghreb and the Arab world (article 2) and that Islam is the religion of the state (article 4). The National Liberation Front (FLN) was declared the single vanguard party (Article 23) which shall define the policy of the nation, inspire the action of the State and supervise the action of the National Assembly and of the Government (article 24). With respect to the Arabicization process, article 76 of the first Algerian constitution states that "The effective achievement of Arabicization should occur in the shortest possible time throughout the territory of the Republic. Nevertheless, as derogation from the present law, the French language may be used provisionally together with the Arabic language." The article relative to the status of the Arabic language as the unic official and national language of the state and the status of Islam as the religion of the state were repeated in all the subsequent constituions (1976, 1989, 1996, 2002 amended in 2008[2]).

The privileged position and role of the Arab language and the process of Arabicization are even more affirmed and detailed in the 1986 Algerian National Chart, which also has a constitutional value, while the existence of the Tamazight language is simply ignored. Officially, the argument used by the FLN or the Algerian regime is to reestablish Arabic its due rights and place and to keep it unpoiled by the French language. But in reality, the promoters of the Arabicization themselves send their children to French schools either in Algeria or in France. Also, the Arabicization process and the privileged position of Arabic is aimed at eradicating Tamazight. Let me illustrate this statement with some concrete examples.

For example, in the aftermath of Algerian independence, the office of Amazigh studies at the University of Algiers was shut down by the Algerian authorities. The name of the Kabyle radio channel *Chaîne Kabyle* was changed to Chaîne 2, erasing the name Kabyle and replacing it with a digit. Its broadcast was also reduced both in time and in space while banning many Amazigh speaking singers and artists from broadcasting. Shortly after, the journal *Ficher de Documentation Berbère* (FDB), published by the Pères Blancs since 1946 was ordered to change its name into Fichier périodique in 1973. It was also ordered to include the rest of the country in its studies rather than merely restricting it to the Amazigh domain. This journal was shut down definitely by the Algerian authorities in 1977. A set of Tifinagh printery icons used to print in Tifinagh

2. The 2008 constitution was aimed at extending the possibility for Bouteflika, then president of Algeria, to run for office a third time while the former constitution had limited candidates to two presidential terms only. Of course, the constitution was approved by the Algerian assembly but not by referendum, and Bouteflika was "reelected" a third time.

(Amazigh alphabet, see § 9) was melted down by the Algerian army who recuperated the printery house Baconnier. In 1977, the name of of the Kabyle football team JSK (Jeunesse Sportive de Kabylie) was changed to JET (Jeunesse electronic de Tizi-Ouzou), once again erasing the name Kabyle from the regime. In March 1980, a conference on Kabyle poetry by Mouloud Mammeri was planned to take place at the University of Tizi-Ouzou (in Kabylia). It was cancelled and the author himself was militarily diverted by the police on his way from Algiers to Tizi-Ouzou on the day the conference was supposed to take place. This gave birth to a general strike all over the region and riots in Tizi-Ouzou, while at the same time revealing to the world the position of the Algerian regime *vis à vis* the Tamazight language and culture. This episode has come to be known as the *Berber or Amazigh Spring*.

For years, the official view of the regimes in place has been anti-democratic and ideologically Arabo-Islamic oriented. They have held that Tamazight is a threat to national unity. Imazighen themselves are intimidated into alienating what they are and identify themselves as Arabs. Even today, affirming the Amazigh identity is considered an offense in many places across North Africa and it is often enough for an Amazigh to be treated as racist just by stating that they are Amazigh and not Arab. In addition, there has been a large number of Amazigh activists or elite 'killed' in doubtful car accidents, a widespread technique used to eliminate political opponents by anti-democratic regimes worldwide.

As a matter of fact, this has been just a continuity of a purge that had started a few years before Algerian independence. In 1949 there was a heated debate and confrontation amongst the Algerian nationalists struggling for the independence of Algeria. At that time, a few steps were taken by the Algerian Popular Party to politically shape the future of independent Algeria. Under the influence of the Arab nationalist movement in Egypt, some members of the Algerian Popular Party were defining Algeria as an Arab and Muslim country, which excludes *de facto* the Amazigh identity. Many influent Kabyles were asking for more democracy within the movement and that the Amazigh dimension of Algeria be considered. These activists opposed the reductionist vision of Algeria as an Arabo-Islamic country, calling clearly for an alternative vision which they called ''Algerian Algeria''whereby the reality of Algeria would not be ignored. There followed a lot of manipulation and distortion of facts by the senior managers of the party aiming at creating a purge within the movement. Most of the activists were eliminated physically while the rest were excluded from the political party (Parti

populaire algérien)[3]. Today, these distorted facts are used by those who are still denying the reality of Algeria, seeing it as an Arabo-Islamic country. As soon as Algeria obtained independence, the Arabo-Nationalist regimes have always made it clear that no other identity, language and culture other than Arab would be given any official recognition. A main objective of the policy of Arabicization has been to erase Tamazight as a language, an identity and a culture. Today, despite the superficial 'softening' of the Algerian regime's policy towards Tamazight, eradicating it is still a dream they cherish and an objective they hope to achieve. In the course of his "campaign" for the 1999 presidential elections in Algeria, the then "official" candidate of the regime, Abdelaziz Bouteflika, declared to the public that "Never, ever, will Tamazight be recognized as official in Algeria." This was declared during the presidential elections campaign in 1999, in Kabylia which was a region where the population was expecting exactly the opposite of what Bouteflika said. This alone shows that electoral campaining in Algeria is no more than a mere formality.

This politically hostile stance of the Algerian authorties notwithstanding, the perseverence of the Kabyles in their fight to gain their language and cultural rights did meet some relative success. In 1990, a department of Tamazight was opened at the University of Tizi-Ouzou and a year later at the University of Bejaia. In 1995, classes of Tamazight opened in Algerian schools but this opening was an intervention after an entire year of boycotting school by the students of Kabylia during the academic year 1994-1995.

In the 1996 constitution, the name Amazigh is mentioned for the first time ever in the Algerian constitution. However, this mention is restricted to the preambule and not consecrated in any article. In the preambule, the Amazigh element is recognized as a component of the Algerian identity alongside Arabic and Islam. In the revised constitution of 2002, Tamazight was officially recognized as a national language alongside Arabic, but this was not official.

In fact, there has been a machinery of laws voted by the rump parliament backing the use of Arabic while forbidding the use of any other language. Thus, in 1991, a law called 'generalizing the use of the Arabic language' was voted by the Algerian rump parliament. The same law was amended in 1998 only to strengthen its effectiveness. This law made it illegal and subjects to prison and fines any individual or organization making a public statement or declaration in another language than Arabic. The official argument put forward to justify such a law was to fight against

3. For a detailed discussion and analysis of this period see Amar Ouerdane (2003).

the use of French, but in reality, it aimed at giving another push to Arabicize what remained of the Amazigh speaking population in Algeria.

In North Africa, the situation has been brought about by the official Arab nationalist ideology and expansionism on one hand, and Islamic extremism on the other. However, because this Arab nationalist ideology and religious extremism have been promoted by official institutions including schools and universities, today the non-Amazigh speaking population is so brainwashed against the Amazigh that they have almost become allergic to the idea that the identity of these countries be defined as Amazigh alongside Arab identity. For the Amazigh speaking population, this is extremely frustrating for two main reasons. First, the Amazigh are the indigenous people of North Africa and Tamazight has been around long before the Arabic language. Second, a historical scam had taken place. Because they have been Arabicized, the non-Amazigh speaking population were misled into believing that they were simply Arab. To challenge the historical claim that the Amazigh are the indigenous people of North Africa, the official regime created a theory which stated that the Amazigh are originally… Arab. In 1986 for instance, Chadli Benjedid, a military official installed as President by the Algerian Army in 1979 before he was deposed by the same army in 1992, declared in an interview to Newsweek magazine that the Amazigh were originally from Yemen[4.] This theory was voiced by Gaddafi an infinite number of times to justify the oppression and denial of the Amazigh in Libya. By doing so, the Algerian regime and the Arab-nationalist proponents think that this gives them the legitimacy to deny the Amazigh their rights.

2.3 Tamazigh morphology, syntax and phonology

In the present section we are going to provide the phonetic, syntactic and lexical data of Tamazight.

2.3.1 Phonetics

Tamazight has 41 basic sounds, among which are 3 vowels and 38 consonants.

Vowels: Excluding the Tuareg varieties which have developed some extra long and short vowels, Tamazight has only three (3) vowels which are

4. Of course this theory was repeated by Gaddafi many times within the Libyan context.

indicated as i, u, and a. Besides these three vowels, almost all varieties have introduced the neutral vowel called schwa ə sometimes indicated as *e.*

Consonants: The 38 consonants in use in Tamazight are categorized as follows:

Table 2-1: Basic sounds in Kabyle Tamazight

Plosives	*b d m t k g q ǧ č* (*ǧ* for ʤ and *č* for ʧ) *ḅ ḍ ṭ ḳ ṣ ẓ ṛ* (pharangealized or 'emphatic') b^w k^w g^w q^w γ^w (labialized)
Fricatives	*f s z ɛ x ɣ h* (*h* = laryngeal, *ḥ* = pharyngeal).
Labialized	
Nasal	*m n*
Lateral	*l*
Thrill	*R*
Semi-vowels	*y, w* (their status being between that of a vowel and that of a consonant.)
Geminates	Geminates are indicated by doubling the corresponding sound, *dd tt gg kk qq*, but are not listed in the alphabet.

2.3.2 Lexicon and morphology

The lexicon constitutes one of the important fields of variation among Tamazight dialects. Besides the basic Amazigh lexicon, the language contains a great deal of loans from other languages, mostly Arabic and French. Loans from other languages such as Latin, Greek, and the extinct Punic (North African variety of Phoenician) are also present but less documented than loans from the former French and Arabic. In the Nigerian and Malian Tuareg varieties of Tamazight, one can also find loans from Haussa and Bambara. Most loan words are so well integrated morphologically into the Tamazight word structure that they are difficult

to recognize as such. As mentioned earlier, discontinuity between the areas where Tamazight is spoken has led to a dialectalization process. As a result, the different areas ended up restructuring, specializing and enriching the lexical stock in different ways depending on the needs specific to each region. Consequently, it is very common to find the same word that has different specialized meanings from one region to another.

Basic words, i.e. excluding derived ones, are composed of a consonantal root and vowels. The consonantal root conveys the semantics (meaning) while the vowels, called *thematic* in the linguistic literature, provides grammatical information[5] such as tense/aspect, person, gender, number, noun category, and so on.. For instance, a root such as *mγr* conveys the meaning of aging, growing, being elder, etc. Its combination with vowels yields the following derivations among many others:

Table 2-2: Example of Tamazight morphology

amɣar: elder
imγur: grow up (imperfective)
meqqer[6]*:* he has(or is a) grown up, he is older
ameq^{w}*ran:* the elder, the tall

In the linguistic literature, root consonants are notated as C followed by numeral subscripts indicating their order. Accordingly, the root *mγr* mentioned above may be indicated as $C_1C_2C_3$. The combination of root consonants with thematic vowels forms a *word stem*. For instance, from the root *mγr* we have derived the imperfective form *imγur* (grow up). The stem of the imperfective is then represented as $iC_1C_2uC_3$. This kind of inflection is termed apophonic. However, there are aspectual situations in Tamazight where a pure derivational process by affixation is applied as illustrated in (2.1) below.

5. Some words, mostly verbs, contain vowels that do not indicate grammatical information but are part of the word itself. Such vowels are called radical vowels.
6 The velar sound *qq* results from the phonological reduplication of the velar γ.

2.3.3 Tense/aspect inflection

Linguists operating within traditional or non-transformational approaches hold that the tense system as known in Indo-European does not exist in Afroasiatic languages (see for instance Cohen 1989). They maintain that the temporal system in these languages is expressed by means of an aspectual system or inflection. As far as Tamazight is concerned, the traditional standard view holds that the grammatical aspectual system is composed of three aspects, often called *accomplished*, *non-accomplished* and *aorist*. These three aspects are exemplified by the sentences (1a) (1b) and (1c), respectively, all of which are derived from the verb radical *azzel*[7].

(2.1) a. i-uzzl (accomplished)
3m.sg.-ran
He ran i/ he has run

b. A i-tt-azzal (non-accomplished)
Aux. 3m.sg.-prog.-run
He is running

c. Ad i-azzl (aorist)
Aux. 3m.sg.-run
He will run

Note that information related to tense or aspect encoded in the sentences above is indicated by means of apophonic vowels (or vowel alternation). The example in (1b) contains the affix *-tt-* inserted between the person morpheme *y-* and the verb radical *azzel*, in addition to the apohonic vowels. With some verbs, the non-accomplished form is derived by means of consonant reduplication instead of the affix *–tt-* as illustrated with the sentences below.

(2.2) a. i-rwl (accomplished)
3m.sg.-run away
He ran away / he has run away

7. In the examples below, I remove the epenthetic vowel *e*, sometimes also indicated as a schwa, which is conventionally inserted between consonants in the Latin trasription of Kabyle Tamazight.

b. A i-rggl[8] (non-accomplished)
Aux. 3m.sg.-prog.- run away
He is running away

c. Ad i-rwl (aorist)
Aux. 3m.sg.-run away
He / it will run away

In addition to the aspectual / tense information encoded in the verbs as illustrated with the examples above, further temporal specification may be made explicit by means of temporal adverbs. The whole conjugation paradigms of the verbs exemplified in (2.1) and (2.2) above are given as (2.3) and (2.4) below, respectively:

Table 2-3: example of non-accomplished conjugation by means of tt-morpheme

	accomplished	aorist	non-accomplished
Nekk (I)	uzzl-γ	ad azzl-γ	a tt-azzal-γ
Kecc / Kem (you)	t-uzzl-d	ad tazzl-d	a t-tt-azzl-d
Netta (he)	i-uzzl	ad i-azzl	a i-tt-azza
Nettat (she)	t-uzzl	ad t-azzl	a t-tt-azzal
Nekkwni (we)	n-uzzl	ad n-azzl	a n-tt-azzal
Kwenwi (you msc)	t-uzzl-m	ad t-azzl-m	a t-tt-azzal-m
Kwennemti (you fem)	t-uzzl-mt	ad t-azzl-mt	a t-tt-azzal-mt
Nitni (they msc)	uzzl-n	ad azzl-n	a tt-azzal-n
Nitenti (they fem)	uzzl-nt	ad azzl-nt	a tt-azzal-nt

8. The sound *gg* results from the phonological reduplication of the the sound *w*.

Table 2-4: example of non-accomplished conjugation by means of consonant reduplication

	accomplished	aorist	non-accomplished
Nekk (I)	rwl-γ	ad rwl-γ	a rggl-γ
Kecc / Kem (you)	t-rwl-d	ad t-rwl-d	a t-rggl-d
Netta (he)	i-rwl	ad i-rwl	a i-rggl
Nettat (she)	t-rwl	ad t-rwl	a t-rggl
Nekkwni (we)	n-rwl	ad n-rwl	a n-rggl
Kwenwi (you msc)	t-rwl-m	ad t-rwl-m	a t-rggl-m
Kwennemti (you fem)	t-rwl -mt	ad t-rwl-mt	a t-rggl-mt
Nitni (they msc)	rwl-n	ad rwl-n	a rggl-n
Nitenti (they fem)	rwl-nt	ad rwl-nt	a rggl-nt

2.4 Noun declension

Tamazight nouns decline for gender, number and state.

2.4.1 Gender[9]

Tamazight morphology makes a distinction between feminine and masculine.

Masculine: the masculine form corresponds to the neutral form of the word. This neutral form is interpreted as masculine[10] by default.

Feminine: the feminine form is indicated by a double *t—t* affix (the prefix *t-* and the suffix *-t*). The feminine equivalent of the word *amγar* above is *tamγart*. However, there are some words whose feminine form contains only the prefix *t-* such as *tarwa* (progenitors) or *tasa* (liver).

9. For an exhaustive study of gender in Tamazight and Hamito-Semitic (or Afro-Asian) languages see Achab (2005).

10. It is considered as masculine by default because the morphology of the word does not display any masculine marker. In Achab (2001) however, I demonstrated that Tamazight nouns were once marked for the masculine by means of a discontinuous? marker *w---w*.

2.4.2 Number

Both masculine and feminine nouns decline for singular and plural in Tamazight. There are two ways of forming the plural of nouns, the regular and the irregular. The former is obtained by alternating the initial vowel of the word and by adding the suffix *-n* (*-in* in the feminine) to the singular form. The latter is obtained by altering two vowels, the initial and another vowel within the word. These two ways are illustrated below:

Table 2-5: regular and irregular plurals

regular plural	**singular**	**plural**
masculine	*amɣar* (elder)	*imɣarn* (elders)
feminine	*tamɣart* (elder)	*timɣarin* (elders)
irregular plural	**singular**	**plural**
masculine	*asaru*[11]	*isura*
feminine	*tasarut* (key)	*tisura* (keys)

2.4.3 State

In addition to gender and number, nouns in Tamazight also alternate with respect to state[12]. This alternation is traditionally referred to as free state versus construct or bound state (henceforth FS and CS respectively). These two forms are illustrated with the feminine and masculine nouns given below:

Table 2-6: state alternation of nouns

	masculine	Feminine
Free state	a-mγar	t-a-mγar-t
Construct state	w-mγar	t-mγar-t

Nouns are in the FS form when they occur as preverbal subjects, objects of a category of prepositions, and as direct objects. These situations are

11. A tool made of wood, used in a weaving activity.

12 For a more detailed discussion of the state alternation phenomenon in Tamazight see (Achab 2001, 2003) and the references cited therein.

illustrated in (2a-c) below, respectively (FS nouns in bold):

(2.3) a. **a-rgaz** i-cca
FS.man 3m.sg.ate
The man has eaten

b. i-wwt s **a-zru**
3m.sg.hit to FS.stone
He launched (something) towards the stone

c. i-enγa **a-zrem**
3m.sg. killed FS.snake
He killed the snake

Nouns are in the CS form when they occur as postverbal subjects, objects doubling accusative clitics, and objects of non-genuine prepositions. These situations are illustrated in (2.4a-c) below, respectively.

(2.4) a. i-cca **w-rgaz**
3m.sg.ate CS.man
The man has eaten

b. i-nγa-t[13] **w-zrem**-nni
3m.sg.killed-cl CS.snake-that
He killed the snake

c. i-wwt s **w-zru**
3m.sg.hit with CS.stone
He hit with a stone

Note that the preposition *S* in (2.3b) and the one in (2.4c) are distinct and have different meanings. Guerssel (1987, 1992) argues that prepositions selecting construct state nouns such as the one illustrated in (2.4c) are case markers that restrict the status of preposition to those selecting free state nouns as in (2.3b). On the other hand, Ouhalla (1988) terms genuine prepositions those that select free state nouns as in (2.3 b) and non-genuine propositions those that select a construct state noun as in (2.4c). The FS form is characterized by the initial vowel *a-* in both masculine and feminine, and the loss of the morpheme *w-* in the masculine. In contrast,

13 The clitic object doubled by a lexical object is specific to a very few Tamazight varieties including Kabyle.

the CS form is characterized with the loss of the initial vowel in both masculine and feminine, and the suffixation of the morpheme w- in the masculine. In Achab (2001, 2005), I showed on the basis of facts well established in the literature that the morpheme w- is a residue of a gender system indicating the masculine. Its current role is to morphologically reinforce the construct state in the masculine. As a consequence, the CS morphology of the masculine form looks more complex than its feminine counterpart. Indeed, when compared to their FS counterparts, the masculine form is characterized by the prefixation of the morpheme w- in addition to the absence of the initial vowel a-, while the feminine form is characterized by the initial vowel a- only. I argued in Achab (2001, 2003, 2005) that the syntactic difference between CS and FS boils down to the absence versus presence of the initial vowel in both masculine and feminine forms. Consequently, I demonstrated that free state nouns are full DPs due to the initial vowel which is a Determiner. This is opposed to construct nouns that are bare NPs and which need to be selected by a head Determiner for them to become full DPs. In the examples given in (2.4) above, the determiners in question do not constitute a homogenous class. Indeed, the determiner is represented by the subject agreement morpheme *y-* in (2.4a), by the object agreement morpheme *–t* in (2.4b), and by the preposition *S* in (2.4c). This relation between the head Determiner and the FS bare NP in the examples provided in (2.4) is indicated with the arrows illustrated below:

(2.5) a. **i**-cca **w-rgaz**

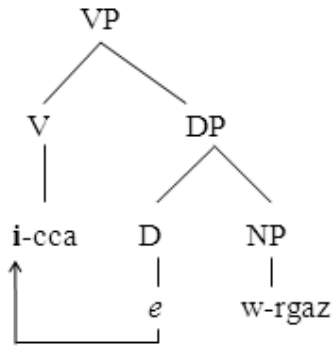
b. i-nγa-**t w-zrem**-nni

c. i-wwt s **w-zru**

At first glance, not only do the agreement morphemes in (2.4a-b) and the non-genuine prepositions in (2.4c) not seem to constitute a natural class, but they also behave differently with respect to adjacency. Guerssel (*op. cit*) considered the hypothesis that these elements constitute a natural class by assuming that they are all case markers. However, his analysis did not go far enough to explain why some (case marker) elements appear adjacent to the CS nouns while others are realized on the verb as agreement morphemes. In Achab (2003) however, I demonstrate that this

state of affairs results from the fact that in situations such as (2.4a) the agreement morpheme *i-* shows up as a verb prefix as a result of its incorporation onto the verb, from a head position adjacent to its CS complement NP in the way illustrated below (see Achab 2003 for more details):

(2.6)



2.5 Word order

The basic order in Tamazight is Verb-Subject-Object (VSO), exemplified in (2.7a) below, although the SVO order is also possible as shown in (2.7b). Because of its rich inflection, the subject may also be morphologically absent, as shown in (2.7c).

(2.7) a. i-swa weqcic aman
Drank the child water
The child drank water

b. aqcic i-swa aman
The child drank water

c. i-swa aman
Drank water
(He) drank water

2.6 Pronouns

Tamazight has different series of pronouns. All pronominal paradigms contain ten (10) different pronouns as given in the following table:

Table 2-7: Different series of pronouns in Tamazight (Kabyle)

	Independent[14]	Affixes[15]		
paradigm	**subject**	**Direct object**	**Indirect object**	**Possessive**
1s.	Nekk (or nekkini)	-yi	-yi	-iw
2s.m.	kečč (or keččini)	-k	-ak	-ik
2m.f.	kem (or kemmini)	-kem	-am	-im
3s.m.	netta	-it	-as	-is
3s.f.	nettat	-itt	-as	-is
1p.	nekwni	-aɣ (anaɣ)	-a (anaɣ)	-nneɣ
2p.m.	kwenwi	-ikwen	-awen	-nwen
2p.f.	kwennemti	-ikwent	-akwent	-nkwent
3p.m.	nitni	-iten	-asen	-nsen
3p.f.	niteti (nitenti)	-itent	-asent	-nsent

2.7 Dialectal variation

In addition to vocabulary differences which should be seen as originally reflecting lexical richness, the most important field of dialectal variation is phonological. The different varieties of Tamazight may be classified into three different groups based on the phonological system: plosive, fricative and affricate dialects. Plosive refers to the dialects that have kept original plosive sounds (mainly Tachelhit or Tuareg varieties) while in other

14. Independent pronouns act as subjects.
15. As complement of verbs, nouns or prepositions.

dialects[16] such sounds have evolved into fricatives or even affricates (mainly those referred to as Zenete in the literature among of which Tumzabt and Mauritanian varieties) in the two latter. The group that is characterized as affricate has evolved a lot further phonologically. Some varieties such as Tarifit are difficult to classify as they have already moved from the fricative status but have not moved enough to consider them as an affricate. These differences do not reflect country boundaries but are older and prior to the constitution of the current borders separating States or countries. In Algeria for instance, all these three varieties coexist. These differences reflect the classification of inhabitants by groups very often referred to as the Masmouda, Sanhadja and Zenete in the literature.

2.8 Tifinagh, the Tamazight alphabet

Imazighen (Berbers) have their own language script or alphabet called Tifinagh. Prior to the 1970s, the use and knowledge of the Tifinagh alphabet was restricted to the Tuareg area who has always used it to write on the sand, carve on rocks, exchange messages and letters Galand (1999) and as epistolary art which they carved on handcraft pieces of work or other artifacts. Other than the Tuareg use of the Tifinagh, a great number of official rock inscriptions and epitaphs which go back as far as the fifth century B.C. (Camps 1978, 1996) were found across North Africa (Chabot 1940, Février 1956).

The Tifinagh was revived in the seventies by the Amazigh cultural movement, notably through the organization called *Agraw Imazighen* (Berber Academy). This organization was based in Paris and founded by Kabyle activists in exile, among whom Mouhand Arav Bessawd [17]. Since then, it has become the symbol of the Amazigh struggle for their language and cultural rights across North Africa and among the Amazigh diaspora. In 2003, the Tifinagh alphabet was officially adopted by the Royal Institute of the Amazigh Culture (IRCAM), which is an academic institution under the government of Morocco in charge of developing and promoting Tamazight in Morocco.

Tifinagh is the name the Tuareg have been using to refer to the alphabet letters. The word Tifinagh itself is the plural form of the word *Tafinaght* or *Tafniqt* in Tamazight, which is a cognate for Phoenician or

16. Kabyle, Central Moroccan Tamazight and Tachawit among many others.
17. After exiling to France, Bessaoued Mohand Arav had to exile for a second time to England where he died in 2000. Due to the pressure put on the French government by the Algerian regime, many opponents had to leave France.

Punic. The origin of the Tifinagh script is disputed between two hypotheses, one of which is local, while the other theory derives it from the Phoenician script. The latter hypothesis is based on two distinct facts: the name Tifinagh itself, as mentioned above and the similartities between Tifinagh and the Phoenician alphabets as revealed in the study on Libyan? Inscriptions published by James Février in 1959. Although the etymology of the name Tifinagh favors the Phoenician origin, however, applying a name to refer to a notion or an object does not constitute evidence for its origin. For instance, the names *France* and *French* are derived from the Germanic name Franks, but nobody would say today that French is a Germanic language. The second argument based on Fevrier's publication reveals that at least six signs of the Tifinagh script are similar to those used in the Phoenician alphabet. However, it was found later that the ancient inscriptions found in the western part of North Africa differ from the ones used in the eastern part, which means that we are dealing with two distinct Libyc script varieties. It is agreed that the eastern variety had come under the Phoenician influence, but not its western variety, which explains the similarities between the eastern variety and the Phoenician alphabet. The Phoenician origin has also been put into question on the basis of diachronic facts. Following the discovery of a stele found in Thugga (today's Dougga, in Tunisia), it was thought that the introduction of the Tifinagh script in North Africa originated no earlier than 138 B.C. Following this dating, Février (1959: 327) concludes that the Libyc script was introduced into North Africa by the Phoenicians.

This Phoenician hypothesis has been challenged by subsequent research and studies showing that the use of Tifinagh inscriptions in some parts of North Africa is much older. The continuous affiliation between the Tifinagh used by the Tuareg population and the Libyc inscriptions found in different parts of North Africa is well established by the similarity between the two script systems. G. Camps (1978, 1996) demonstrated that the engravings found in Azib n'Ikkis in the Haut-Atlas region of Morocco and reported by J. Malhomme (1959, 1960) date back to 500 years at least (Camps 1996: 2571). The local origin hypothesis of the Tifinagh and the Libyc script continued to benefit from new findings, notably the rock engravings discovered throughout northern Africa. These were most notably found in the Algerian Sahara which date back to the period referred to as the Caballin/Horse period (situated between - 1500 years and a few centuries B.C.) in the rock art literature. Many researchers agree to the symbols and signs used as the prealphabetic precursors of those used in the Libyc and Tifinagh scripts (see Chaker & Hachi: 2000 and references cited therein). The alphabet used in the inscriptions was first referred to as

Libyc, Lybico-Punic[18] or Libyco-latin depending whether they are monolingual (libyc only) or bilingual (the other language being identified either as Punic or Latin). The term *Libyc* applied to these inscriptions is the same as the name given to present Libya. It was used by Greek and Latin authors in the antiquity to refer to the indeginous population of North Africa. It is derived from the name *Lebbu*, used by ancient Egyptians to refer to the people located on the other side of their Western border.

2.9 Writing Tamazight today

There have been many attempts to adapt the Tifinagh characters to modern usage, namely by introducing new symbols in order to take vowel sounds into consideration. Its use was advocated and valued by the Academie Berbère, an organization created by Kabyle activists. Most of them were exiled in Paris.

Although the use of Tifinagh may be considered relatively widespread among Amazigh activists in North Africa, the bulk of the existing literature is written in a Latin script system. The latter has been widely adopted in scientific, literary, schools and university circles both in North Africa and in Europe. It is also the system that was officially adopted in Mali and Niger and more recently by the HCA[13] (High Agency for Amazighity), an official and state sponsored institution in Algeria. Although there are a few cases illustrating attempts to transliterate the Tamazight language into Arabic characters, such situations are mostly restricted to Muslim religious circles. Today, the Algerian regime is trying its best to impose the Arabic script in schools and force its adoption by Amazigh scholars. In Morocco, the The Royal Institute of the Amazigh Culture (IRCAM) has officially adopted the Tifinagh script.

2.10 Tamazight in the linguistic phylum

Tamazight belongs to the African branch of the so-called Hamito-Semitic phylum, also known as Afroasian. The expressions *Hamito-Semitic* and *Afroasian* are not to be understood as referring to an "ancestor" language from which all the aforementioned languages were derived but merely as a convenient technical term gathering languages spoken in Africa and in

18. The term Punic refers to the Phoenicians established in North Africa in the Antiquity.

Asia (Middle East), and which present striking resemblances. The other languages or branches (of languages) acknowledged to be part of the Afroasian phylum are Egyptian, Chadic (including Hausa, spoken in Niger, Nigeria), Cushitic (Agaw languages, Bedawi / Beja, spoken in Ethiopia, Eritrea, Sudan and Egypt), Omotic (Dizi, Nayi and Sheko, spoken in South-west Ethiopia in the Kafa region) and Semitic languages (Hebrew, Amharic, Arabic, Aramaic and a number of other extinct languages such as Cananian, Akkadian and Asyrian).

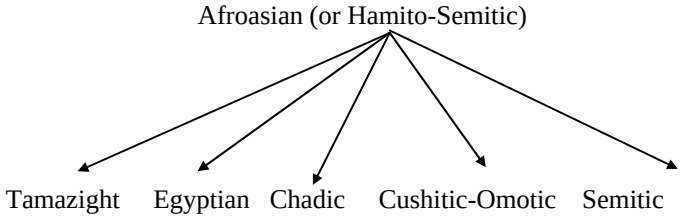


Fig 2-7 Afroasian or Hamito-Semitic phylum

Note that the classification above is problematic in that it puts Tamazight and Egyptian, which are languages, on a par with Chadic, Cushitic-Omotic, and Semitic, which refer to language groups or families.

The question whether the affinities between Semitic and the languages spoken in Africa such as Tamazight stem from the same origin or whether they result from linguistic contacts throughout history is a matter of ongoing debate (see D. Cohen 1988a: 1-8). The expression Hamito-Semitic is arbitrary and clearly problematic for a number of reasons. On the one hand, it refers to a religious and mythological history that is located in the Middle East. It is derived from the names Ham and Shem, which correspond to two biblical characters referring respectively to the eldest and the second sons of Noah mentioned in the *Book of Genesis*, (Chapter X). Therefore, the adjective Hamitic is particularly misleading in that it refers to two different concepts, i.e. a biblical name in the Middle East applied to languages spoken in Africa. Shem is believed to be the ancestor of the Semites. Schölzer (1781)[19] introduced the word Sem as a linguistic designation to name the group of languages spoken by the Semites. The adjective Hamitic, also spelled Chamitic, was introduced by Renan (1855) as a linguistic appellation to refer to the Tamazight (Berber) and the Egyptian languages because of the affinities they share with

19. Mentioned by D. Cohen (1988a: 1).

Semitic languages. The expression Hamito-Semitic was suggested by Benfey (1869) to name this supposedly demonstrated linguistic phylum. On the other hand, the appellation Hamito-Semitic suggests that there is a Hamitic subgroup of languages that is analogous to the Semitic subgroup. A number of linguists working on these languages argued against such an analogy (see for instance Greenberg 1950 and Hayward 2000).

CHAPTER THREE

VERB STRUCTURE AND THE ORGANIZATION OF THE GRAMMAR

3.1 Introduction

In this chapter I sketch out the model of the organization of the grammar adopted in the present book specifying the levels of representation of the event structure (ES), the lexical structure (LS) and the predicate-argument structure (PAS). The mapping between these substructures and their levels of representation will allow us to account for the derivation of the internal structure of the different verb classes of state and change of state under investigation. As a background to the discussion provided in Sections 4 and 5, I first retrace in Section 2 the history and the development of the verb internal structure by reviewing some of the outstanding proposals in the linguistic literature. This review will highlight in particular the fact that the authors of these analyses create confusion between event structure, lexical structure and predicate-argument structure. It will become clear from our proposal made in Sections 4 and 5 that such confusion is due to the fact that LS and ES have erroneously been taken to form one structure while they should be considered as reflecting two distinct structures.

3.2 ES, LS and PAS: an overview

The notion of event has a long history that linguists trace back at least to Aristotle[1]. In *Metaphysics* (1048) and *Nicomadean Ethics* (1074), Aristotle distinguishes between two main verb classes, which he called *kineseis* and *energiai* verbs. The class of *kineseis* verbs, supposed to contain an inherent property indicating the final state of the event involved, are contrasted with the class of *energiai* verbs, which do not contain such an

1. Aristotle's thoughts on this topic were particularly documented by Kenny (1963: 173-183). The discussion of Aristotle's ideas provided here is based on Kenny (*op. cit.*), Abush (1985) and Pustejovsky (1995).

inherent property. In modern linguistics *kineseis* verbs correspond to *accomplishments* and *achievements*, while *energiai* verbs correspond to *activities* and *states* (see below). The term 'achievement' was coined by Ryle (1949: 149) to designate verbs such as hear, find, win, unearth, cure, convince, etc, which indicate instantaneous events as opposed to activity verbs (task verbs in Ryle's terminology) such as listen, discover, look, etc, which may last throughout a long period of time. Moreover, Ryle distinguishes between 'achievements with an associated task' and 'purely lucky achievements', which correspond to Vendler's (1957, 1967) accomplishments and achievements respectively. I will get back to Vendler's classification shortly.

Kenny (1963) used the expression 'performance verbs' to refer to Ryle's achievement type, which he first contrasts with activity verbs. Kenny introduced a variety of diagnostic tests based on aspectual values as a tool to distinguish between the different types of events. For instance, Kenny used the incompatibility of meaning between the progressive and the present perfect to distinguish between *performance* and *activity* verbs. With performance verbs, progressive and perfect aspects sound contradictory. In other words, the sentence in (3.1a) below does not entail the meaning in (3.1b):

(3.1) a. John is building a house
b. John has built a house

By contrast, with activity verbs progressive and perfect aspects are not contradictory. In other words, the sentence in (3.2a) below in the progressive entails the meaning indicated in (3.2b) in the perfect aspect:

(3.2) a. John is running
b. John has run

Kenny also introduced another distinction between opposing activity and achievement verbs to verbs of state. Unlike achievement (3.3a) and activity (3.3b) verbs, verbs of state do not occur in the progressive aspect as shown in (3.3c):

(3.3) a. John is building a house
b. John is running
c. * John is knowing the truth

Drawing on the classifications proposed by Ryle (1949) and Kenny (1963) recalled above, Vendler (1967)[2] proposes a new classification distinguishing between four major types of verbs called state, activity, accomplishment, and achievement, which he argues are determined by temporal criteria such as *duration*, *instantaneity* and *delimitation*. Vendler's classification is illustrated with examples below (as listed by Dowty 1979: 54):

Table 3-1 Vendler's classification of aspectual types of verbs

States	*Activities*	*Accomplishments*	*Achievements*
know	run	paint a picture	recognize
believe	walk	make a chair	spot
have	swim	deliver a sermon	find
desire	push a cart	draw a circle	lose
love	drive a car	push a cart	reach

Dowty (1979) proposes to capture the aspectual differences highlighted by Vendler using the predicate decomposition as developed by early generative semanticists (Lakoff 1965; McCawley 1968, 1973 among many others). With the exception of stative verbs, which he presupposes to involve a simple relation of predication, for each class of verbs Dowty postulates a logical structure composed of a stative predicate combined with a sentential abstract verb, which he paraphrases as DO, BECOME or CAUSE depending on the semantics of the verb under consideration. Accordingly, Dowty suggests the following correspondence between verb classes and their logical structures:

(3.4)

Verb class	*Logical Structure*
a) Simple statives	Simple relation of predication
b) Activities	DO
c) Achievements	BECOME
d) Accomplishments	[DO] CAUSE [BECOME]

The correspondence shown above read as follows. Verbs of states involve no abstract verb; they are seen as a simple relation of predication. Activities are seen as event predicates under the scope of the verb DO. Achievements are event predicates indicating change of state under the scope of the operator BECOME. Finally, accomplishments are seen as

2. Vendler's (1967), which is a revised version of Vendler (1957), incorporated and refined some of the ideas proposed by Ryle (1947) and Kenny (1963).

complex event predicates composed of an activity, which is under the operator DO; a change of state under the operator BECOME; and a causative relation between the activity (DO) and the resulting state. In Dowty's analysis, sentential operators are seen as the source from which accomplishment, activity and achievement verbs draw their truth-conditions.

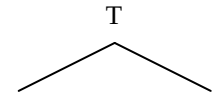
Dowty's proposal relating aspectual properties to abstract verbs was later taken up by other linguists. For instance, Rappaport and Levin (1998: 108) propose the following pairing between event types and event structure templates:

(3.5)	[x ACT <$_{MANNER}$>]	(activity)
	[x <*STATE*>]	(state)
	[BECOME [x <*STATE*>]]	(achievement)
	[x ACT <$_{MANNER}$>] CAUSE	
	[BECOME [y <*STATE*>]]	(accomplishment)
	[x CAUSE [BECOME [y <*STATE*>]]]	(accomplishment)

Rappaport and Levin refer to the structures above as event templates. In their earlier works, however (Rappaport and Levin 1996 for instance), they had referred to the same structures as lexical-conceptual structures. Pustejovsky (1991) and Tenny and Pustejovsky (2000) insist upon the distinction between event structure and lexical-conceptual structure, arguing that they convey different types of information. They maintain that events provide information relevant to space, time and causation, while LCSs provide lexical information and determine thematic relations. Pustejovsky (1991) further argues that word meaning is not only a composition of semantic features in the form of primitive constituents, but that it is also highly structured. Consequently, Pustejovsky proposes two distinct representations for LCS and ES at the lexical level, which are mediated by another representation called LCS-bar in the way illustrated in (3.6b) for the sentence in (3.6a) (Pustojovsky 1991: 58):

(3.6) a. John closed the door

b. ES:



LCS': [act (j, the-door)] & ¬ [closed (the-door)]

LCS: cause ([act (j, the-door)] become [closed (the-door)]

To account for the differences between the aspectual classification of verbs proposed by Vendler (see above), Pustejovsky (1995: 72) extends to event structure the syntactic notion of headedness, which he takes to determine prominence of subcomponents. He suggests for instance that accomplishment verbs (e.g. *build*) have a head-initial event structure, while achievement verbs (e.g. *arrive*) have a head-final event structure. In his analysis, the role of initial headedness is to put the focus of interpretation on the action that brings about the state, while final headedness puts focus on the resulting state (Pustejovsky 1995: 73). Causative / unaccusative alternating verbs such as *break* on the other hand are considered unspecified with regard to headedness, which "makes available two [distinct] grammatical constructions, the unaccusative […] and the causative […]" (p. 192). Accordingly, Pustejovsky suggests that the projection of the unaccusative structure results in a left-headed structure whereby the resulting state component gets foregrounded because the causative event is "shadowed". By contrast, the projection of the causative structure results in a right-headed structure in which the agentive event gets foregrounded. In the latter situation, both the external and the internal arguments are projected and mapped onto their sub-events.

Unlike the analyses recalled above, other linguists consider event structure syntactic rather than lexical. For instance, Ritter and Rosen (2000) argue that event structure is determined by the functional projections dominating VP, namely Agr-s and Agr-o, by hosting in their specifiers the arguments that identify the initiation and the termination point of events in the way suggested by van Voorst (1988). Borer (1994, 1996), and Benua and Borer (1996) adopted a similar approach arguing that subjects are related to the initiation point of events while objects are related to their delimitation point. Borer (1994) proposes that the argument acting as the originator of the event is in the spec of originator aspect

(Asp_{OR}), while the argument acting as the event measurer (Tenny 1994) or delimiter (Van Voorst 1988) is associated with a spec of another type of aspect called measure aspect (Asp_{EM}). Tenny (1987, 1994) and Ritter & Rosen (2000) adopted a similar approach.

Van Hout (2000) adopts an intermediate view between the lexical and the syntactic views mentioned previously. She suggests that event structure is determined semantically, while acknowledging that it is identified in the syntax by mapping the participants involved onto the external and the internal positions. Van Hout argues that such a mapping obtains by raising the external and the internal arguments from the domain of VP to the Specifier positions of AgrS and AgrO, respectively. She considers AgrO to be the domain where telicity and strong Case features are checked. Objects of unaccusative verbs get the telic feature checked in AgrO but are assigned Case in AgrS because of the Extended Projection Principle (EPP), thus following Borer (1994). However, in Van Hout's view, the projection of AgrO is mandatory only in as much as the verb or the predicate has a telic interpretation, which is determined by the semantics of the event.

Like Van Hout, Travis (2000) also adopts an intermediate view acknowledging that event structure is pertinent at both the lexical (or semantic) and the syntactic levels. Travis suggests that event structure is first represented in the semantic domain, but doubled by the VP architecture in the syntax. The latter corresponds to the standard predicate-argument structure. Travis proposes a direct mapping between event subcomponents, which are represented at the lexical level, and the VP subcomponents, which are represented in the syntax. She further argues that the VP subcomponents in the syntax reflect the semantic sub-events CAUSE and BE / BECOME of the LCS. Levin & Rappaport (1999:112) adopts a similar view, arguing that each subevent in the event structure must be identified by a lexical head (e.g. a V, an A, or a P) in the syntax.

A number of linguists[3] operating within the lexical semantic approach argue that thematic relations are better captured with the predicate decomposition analysis, as an alternative to the one based on theta role labels proposed by Stowell (1981) and Williams (1981). The predicate decomposition approach was inspired by earlier work in generative semantics (see for instance Lakoff 1965; McCawley 1968, 1973 among

3. Hale and Laughren (1983); Hale and Keyser (1986, 1987); Guerssel (1986); Zubizarreta (1987); Grimshaw (1990); Booij (1992); Rappaport et al. (1993); Levin and Rapapport (1986); and Pustejovsky (1988, 1991, 1995) among many others.

many others). Within such a view, thematic relations are seen as holding between primitive constituents paraphrased as CAUSE, COME, BECOME, BE, etc., which compose the verb, and their variables, indicated as *x* and *y*, that act as placeholders for arguments. Getting inspiration from Jackendoff's (1976) conceptual structures, lexical semanticists[4] suggest that thematic relations are represented in the form of Lexical-Conceptual Structures (LCS), which they suppose to be listed in lexical entries of verb. Such LCSs are defined as a means that "provides a representation of the meaning of a verb through a predicate decomposition, allowing arguments of a verb to be identified with respect to substructures in the decomposition." (Rappaport et al. 1993: 52). An example of LCS is illustrated below with the causative (3.7a) and the non-causative (3.7b) alternates of the verb 'break', keeping in mind that *x* and *y* are variables acting as placeholders for arguments:

(3.7)	a.	Causative BREAK:	[*x* cause [*y* become BROKEN]]
	b.	Intransitive BREAK:	[*y* become BROKEN]

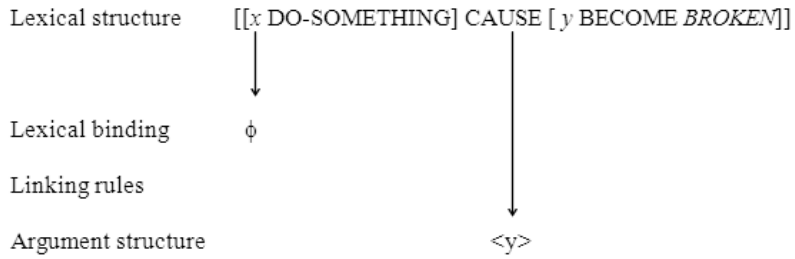
Unlike LCS, which refers to semantic relations between predicators and their variables, PAS refers to syntactic relations between predicators and their arguments. The relation between LCS and PAS therefore corresponds to the mapping between the variables in the LCS, and the arguments associated with predicators in the syntax. For this reason, PAS is viewed as the interface between semantics and syntax (see for instance Levin and Rappaport 1995). Because of this dual relevancy, linguists do not always agree as to the level where the PAS is represented. While some linguists assume a lexical representation[5], others argue in favour of a syntactic representation[6].

The relation between variables, which are associated with LCS, and arguments, which are associated with PAS, is supposed to be established through a set of rules often called linking or mapping rules. The two structures are not necessarily identical. For instance, unaccusative verbs alternating with the causative use are said to have a transitive LCS but an intransitive PAS (Hale and Laughren 1983; Hale and Keyser 1986;

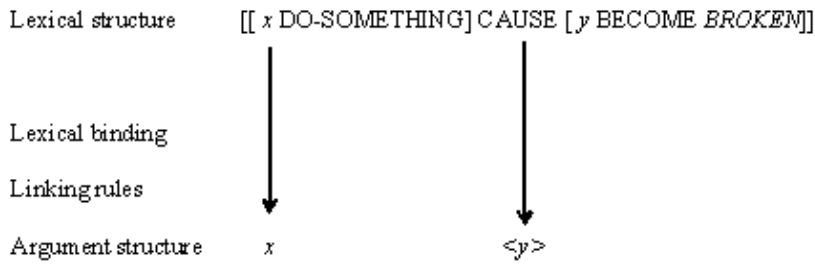
4. See references mentioned in note 3.
5. Hale and Keyser (1986), Zubizarreta (1987); Grimshaw (1990); Booij (1992); Rappaport et al. (1993), Levin and Rapapport (1986, 1995); and Rappaport et al. (1993).
6. Marantz (1984), Stowell (1981), Williams (1981), Chomsky (1981) among many others

Guerssel 1986; Levin and Rappaport 1995). Levin and Rappaport (1995: 108) suggest that in such a case, the position of the external argument associated with unaccusative alternates is bound at the LCS level, which prevents it from being projected into argument structure. This proposal is illustrated in (3.8) below with the intransitive alternate of the verb *break*, as compared to the representation given in (3.9) for the transitive alternant (from Levin and Rappaport 1995: 108):

(3.8) Intransitive *break*



(3.9) Transitive *break*



The lexical view displayed above contrasts with the one adopted in Government and Binding (GB), which supposes predicate-argument structure of verbs to be derived in the syntax. In GB, PAS is seen as the projection of lexical properties of verbs (Projection Principle). Such a principle stipulates that the lexical category V projects a syntactic (complement) position destined to host the object (or internal) argument associated with the verb. If the verb is transitive, the maximal projection [$_{VP}$ V-NP] thus formed projects a specifier position to host the subject (or external) argument (Marantz 1984) yielding the structure [$_{VP}$ NP-V-NP].

Ultimately, the external argument of the transitive or the internal argument of the intransitive verb ends up in the subject position for reasons of EPP (Extended Projection Principle) , where they surface with the nominative Case.

Within the syntactic approach just demonstrated, thematic relations are seen as specified in the lexicon but realized in the syntax (Williams 1981). Stowell (1981) and Williams (1981) formulated this idea in terms of theta role labels. Stowell (1981) suggests that each predicator has its own *theta grid* in the lexicon. For instance, he proposes that the verbs *put* or *hit* have the theta grids illustrated in (3.10a) and (3.10b) below, respectively:

(3.10) a. PUT: <*Agent, Theme, Location*>
b. HIT: <*Agent, Theme*>

Chomsky (1981) proposes that theta roles are assigned in the syntax by predicators to syntactic positions, which ultimately host their appropriate arguments.

3.3 Confusion between LS, ES and PAS in the literature

The definitions and descriptions recalled in the previous section regarding the composition of the verb internal structure reveal that event structure and lexical structure have often been confused. As a matter of fact, what is taken to correspond to lexical structure by one author is referred to in terms of event structure by another. The same representations are alternately called lexical-conceptual structures (Jackendoff 1976, 1983, 1990; Guerssel 1987; Rappaport and Levin 1996 among many others) logical structures (Dowty 1979); event structures (Pustejovsky 1988, 1991, 1995); lexical cores (Pinker 1989) and Event templates (Rappaport and Levin 1998). The reason for such confusion is due to the fact that LS and ES have been erroneously taken to form one structure while they should be considered as forming two distinct structures, with two different origins. As recalled in the previous section, the idea that ES and LS are distinct was stressed by some linguists among whom Pustejovsky (1991), Tenny and Pustejovsky (2000), Grimshaw (1993) and Talmy (2000). Tenny and Pustejovsky (2000) argued that event structure conveys information relevant to space, time, causation while lexical structure conveys lexical information and thematic relations.

Another type of confusion observed in the literature is the one related to the linguistic levels where event, lexical, and predicate-argument structures are represented. While some authors suggest that lexical-

conceptual structure is pre-syntactic[7], others argue in favour of a syntactic level[8]. Yet some other authors take an intermediate stand arguing that event structure is relevant to both levels[9]. As will be clearly shown in the next section, the ambiguities just highlighted disappear in the model proposed in the present dissertation.

3.4 Verb internal structure and the organization of the grammar

In the present section I outline the model of the organization of the grammar adopted in the present work by specifying the levels of representation for ES, LCS and PAS.

3.4.1 Event structure

Following Jackendoff (1983, 1990) and Pinker (1989) I adopt the idea that event structure is drawn from the mental representation of events, which are established from experience or memorized as conceptualized mental schemas. Mental schemas are structured in a way that makes possible their pairing with lexical structures, which are part of the speaker's lexical knowledge. Jackendoff (1983, 1990) suggests that events are organized on the basis of ontological categories, which he defines as the conceptual counterparts of syntactic categories. He proposes the following correspondence between the two types of categories:

(3.11)

Ontological categories		*Syntactic categories*
EVENT	⇒	Sentence
STATE-Function	⇒	V
EVENT-Function	⇒	V
THING	⇒	NP
PATH	⇒	PP
PLACE	⇒	PP
PROPERTY	⇒	Adjectives or lexicalized as verbs
MANNER	⇒	Adverbs or lexicalized as verbs

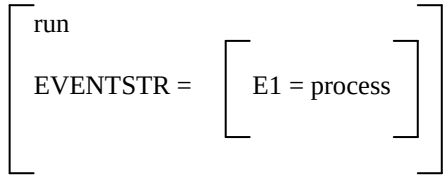
7. Jackendoff (1976 1983, 1990); Hale and Laughren (1983); Hale (1986); Guerssel (1987); Rappaport and Levin (1986, 1996, 1998 and subsequent work); Pustejovsky (1988, 1991, 1995); Pinker (1989) among many others
8. Ritter and Rosen (2000); Borer (1994, 1996); Benua and Borer (1996); Tenny (1987, 1994) and Ritter & Rosen (2000) among others.
9. For instance Van Hout (2000) and Travis (2000)

Using the categories above as devices, Jackendoff proposes conceptual representations of the type illustrated in (3.12b) for the event indicated in (3.12a) (Jackendoff 1990: 45, (2)):

(3.12) a. John ran into the room
b. [$_{Event}$ GO [$_{Thing}$ JOHN], [$_{Path}$ TO ([$_{Place}$ IN ([$_{Thing}$ ROOM])])]]

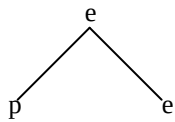
The way event and lexical structures are represented differ from one author to another. Compare for instance the representational system adopted by Jackendoff as illustrated above, with the one adopted by Pustejovsky (1995) as illustrated below:

(3.13)



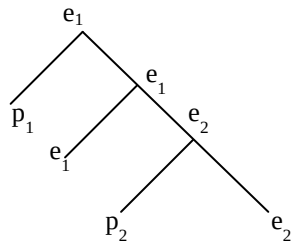
In the present study, I keep the bracketed representation for lexical structure, while adopting the syntactic arboreal representation for event structure to highlight its resemblance with the predicate-argument structure in the syntax. Accordingly, the monadic structure of the event indicated by the verb 'run' will be represented as in (3.14) and the letters *e* and *p* stand for event and participant, respectively:

(3.14)



The representation in (3.14) is monadic, therefore appropriate for activity and stative event types. They contrast with accomplishment and achievement events, which have a dyadic structure. Adopting the same arboreal representation, the dyadic event structure corresponding to accomplishment and achievement verbs will look as follows:

(3.15)



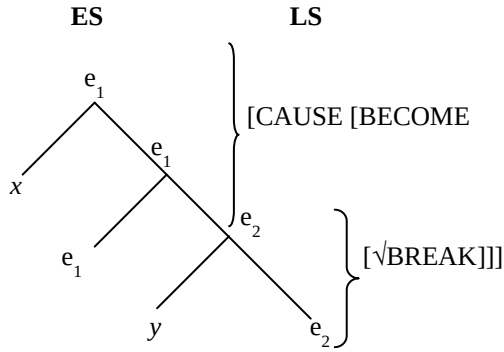
Here arises the question of how to determine the order or the hierarchy of the two subcomponents composing a dyadic event such as those indicated as e_1 and e_2 in (3.15). Two types of explanations are available in the literature regarding this question. Grimshaw (1990: 26-27) assumes by definition that activity or causative subevents are always more prominent than result sub-events. Pustejovsky (1995) on the other hand accounts for such a hierarchy in terms of internal aspectual (temporal) properties. In Pustejovsky's view, the higher and the lower subevents are temporally ordered in such a way that the subevent that takes temporal precedence is always realized higher in the structure. My view of internal structure as adopted in the present work does not include aspectual structure; therefore I do not subscribe to Pustejovsky's proposal. The view I adopt here is simple. Since verbs of change of state indicate events that culminate into change of state, it is therefore reasonable to suppose that the event subcomponent indicating change of state is the one that comes last. This view is of course akin to Grimshaw's as stated above, but it is formulated in a simpler and more rational way. Having clarified the way event structure is viewed in the present study, I will now move to the lexical structure, which is the topic of the next subsection.

3.4.2 Lexical Structure

As already stated in the previous subsection, event structure is not part of the lexical knowledge corresponding to verbs but a mental representation of events happening in the external world. Therefore, event structure has to be distinguished from the representation of lexical knowledge that enables the speaker to express events linguistically by means of verbs that are available in the language. Viewed this way, lexical structure is an intermediate stage between conceptualized events and the verbs by means of which they are expressed. Being analogous to the mental representation of events, lexical structure of verbs must reflect the event composition. Therefore, the most appropriate way to represent their structure is the one

provided by the predicate decomposition approach viewing internal structure as a compound of primitive predicates associated with variables acting as shareholders for arguments in the syntax in the way recalled in Section 2 above. Primitive predicates, which are often indicated in the form of BE, COME, ACT, CAUSE, etc. in the literature are to be considered as abstract verbs indicating semantic functions such as 'being', 'coming', 'acting', 'causing', however deprived of any lexical or morphological content. In the present work, such content is provided by the lexical ROOT, which is also part of the lexical structure of verbs. Once an event is represented at the conceptual level, a lexical structure that matches best with the event is then retrieved from the mental dictionary or lexicon to be mapped onto the event structure. I illustrate the mapping between event structure and lexical structure with the verb 'break' as follows:

(3.16)



Lexical structure and event structure together compose the internal structure of verbs. Together, they determine their corresponding predicate-argument structure, which is the topic of the next subsection.

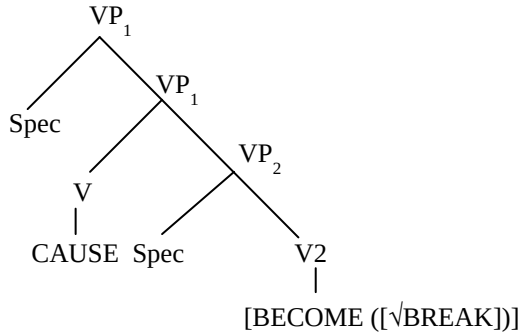
3.4.3 Predicate-argument structure

The mapping of the event structure and the lexical structure illustrated in (3.16) above yields the predicate-argument structure represented in (3.17b) below, where the abstract verbs are lexicalised by the lexical root following the Morphological Constraint formulated in (3.17a):

(3.17) a.*Morphological Constraint*

Abstract verbs encoded in the LCS component of verbs must be lexically or morphologically identified by their lexical roots in the syntax.

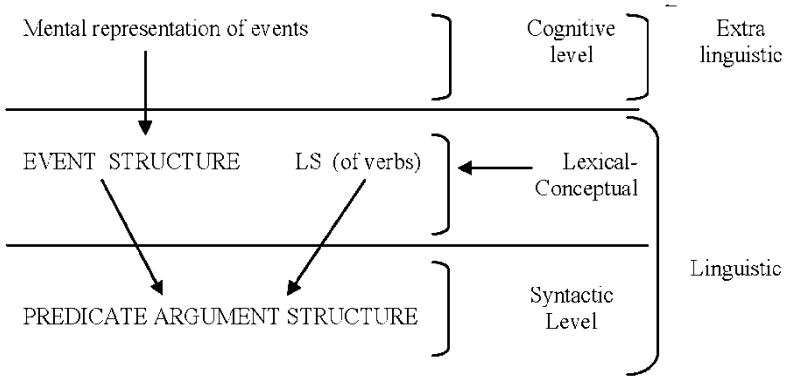
b.



As may be seen from the structures illustrated above, ES, LS and PAS are in a way analogous, which is no surprise, given that they describe different successive stages of the same derivation. This explains why event structure is sometimes viewed both as semantic and as syntactic by some linguists as recalled in Section 2. As a reminder, Levin & Rappaport (1999:112) propose that each subevent in the event structure must be identified by a lexical head (e.g. a V, an A, or a P) in the syntax. Likewise, Travis (2000) argues that event structure is doubled by the VP architecture in the syntax in such a way that the VP subcomponents reflect the semantic sub-events of the lexical-conceptual structure.

The different levels of representation composing the organization of the grammar are illustrated in the diagram shown below:

(3.18)



In the diagram above, event structure results from the projection of the mental representation of events into the linguistic component (or level) from the cognitive level, which is extra-linguistic. Once the event structure isrepresented, the lexical structure (LS) of verbs that matches best with (or which translates best) the event is retrieved as a lexical entry from the lexicon / mental dictionary or whatever part of the memory is responsible for storing lexical entries. Event structure and its lexical structure counterpart are then mapped together at the lexical-conceptual level; the resulting structure is projected into the syntactic component as the predicate-argument structure. The ES provides the structural frame, while the LS provides the appropriate semantic primitives.

The three-level based model of the organization of the grammar I proposed above has much in common with the views expressed by Talmy (2000), Pustejovsky (1991) and Grimshaw (1993), although these latter authors did not provide diagrams. Talmy (2000) postulates three distinct levels, which he referred to as the *Cognitive Representation* (CR), the *Lexical Subsystem*, and the *Grammatical Subsystem*. He proposes that lexical elements contribute lexical content to the CR, while grammatical specifications provide a "skeletal structure or scaffolding for the conceptual material that is lexically specified." (p. 21). The previously mentioned levels suggested by Talmy would correspond to the cognitive level, the lexical-conceptual level and the syntactic level respectively in the diagram I proposed in (3.18).

Likewise, Pustejovsky (1991) takes LCS of verbs to refer to semantic primitives such as ACT / CAUSE / BECOME, while taking event structure to represent event sub-components. In his analysis, the two

structures are mediated by another level referred to as the LCS-bar. These three levels as suggested by Pustejovsky are illustrated with the structure in (3.19b) for (3.19a) below ((16b) in Pustejovsky 1991: 58):

(3.19) a. John closed the door

b. ES:

LCS': [act (j, the-door)] & ¬ [closed (the-door)]
[closed (the-door)]

LCS: cause ([act (j, the-door)]) become [closed (the-door)]

Grimshaw (1996) also distinguished between the 'semantic structure' and the 'semantic content' of verbs, which I take to correspond to our ES and LS, respectively, in the model I proposed above (3.18).

Having outlined the model of the organization of the grammar specifying the levels at which ES, LS and PAS are represented; I will now show how this model is applied to the verb classes of state and change of state investigated in the subsequent chapters.

3.5 Approach and proposals

The aim of the present section is to explain how I intend to account for the various verb classes under investigation using the model of the organization of the grammar presented in the previous section. I start with verbs of quality (§ 5.1), followed by unaccusative verbs (§ 5.2), verbs of spatial configuration (§ 5.3) and causative verbs (§ 5.4).

3.5.1 Verbs of quality

As already mentioned in the previous chapter, in Kabyle Tamazight (Taqbaylit) verbs of quality may occur in two different forms, which I have so far referred to as pure stative (or accusative) and inchoative (or nominative).

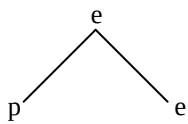
3.5.1.1 Pure stative (or unaccusative) form

As mentioned in the previous chapter, the class of verbs occurring with accusative clitics such as the one exemplified below indicate pure state:

(3.20) Zeggaγ-it
Red.perf-3m.sg.acc.
It is red

As a recapitulation, the form in (3.20), which I called pure stative or accusative, indicates pure state. Therefore, it is to be expected that its ES be monadic, and correspond to the one I proposed in (3.14) for stative verbs, repeated below:

(3.21)

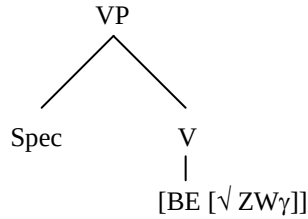


The LS corresponding to the verb *Zeggaγ* is also monadic. Instead of considering stative verbs to involve a simple relation of predication as proposed by Dowty (1979) for instance, followed by Rappaport and Levin (1998) (see Section 2), I argue in the next chapter that LS of the verb exemplified in (3.20) contains an abstract stative verb, which I call BE, and the lexical root √ZWγ that provides the lexical content to the verb as illustrated below. Keep in mind that *x* is a variable acting as a placeholder to be replaced by an argument in the syntax (see Section 2):

(3.22) [BE *x* [√ ZWγ]]

Following the proposal made in the previous section, the LS in (3.22) is mapped onto the ES in (3.21) ABOVE yielding the following PAS in the syntax:

(3.23)



The lexical √ROOT in (3.23) is generated as the complement of the verb BE. Hale and Keyser (1998, 2002) suggest that lexical roots are projected in the complement position of VP. Embick (2004) admits that they might as well be projected as the complement of V. The structure associated with stative verbs will be dealt with ingreater detail in Chapter 4.

3.5.1.2 The inchoative (or nominative) form

As already mentioned in Chapter 1, verbs of quality in Taqbaylit (or Kabyle) Tamazight also occur with nominative clitics in the suffix position when they indicate change of state, as exemplified in (3.24a) below, to be compared with the (accusative) stative form exemplified in (3.24b) and dealt with in previously:

(3.24) a. I-zwiγ
CL.3m.sg.nom-red
It / he reddened

b. Zeggaγ-it
Red.perf-3m.sg.acc.
It is red

Unlike the (accusative) stative form (3.24b), which always indicates pure state, the (nominative) inchoative form in (3.24a) may indicate either a resultative state or a change of state. Accordingly, the event structure associated with the nominative structure must be composed of two subevents, which correspond to the resulting state and the transition process leading to it. In the linguistic literature, inchoative verbs such as the English verb exemplified below in (3.25) are supposed to contain the abstract verb BECOME (see Dowty 1979; Pustejovsky 1991, 1995; Rappaport and Levin 1998 among many others.)

(3.25) The door closed

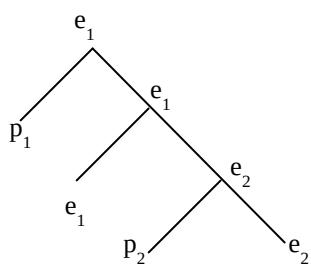
Pustejovsky (1995: 53) argues that the sentence in (3.25) indicates transition from the state *not closed* to the state *closed* involving the same logical interpretation as the one indicated by the operator BECOME. Accordingly, he proposes the ES illustrated in (3.26) below, where E_1 and E_2 indicate the transition process and the resulting state (from Pustejovsky 1995: 80):

(3.26)

$$\left(\text{EVENTSTR} = \begin{pmatrix} E_1 = \text{process} \\ E_2 = \text{state} \end{pmatrix} \right)$$

Accordingly, within the approach proposed in the present chapter, the verb *i-zwiγ* exemplified in (3.24a) above has the following dyadic ES and LS:

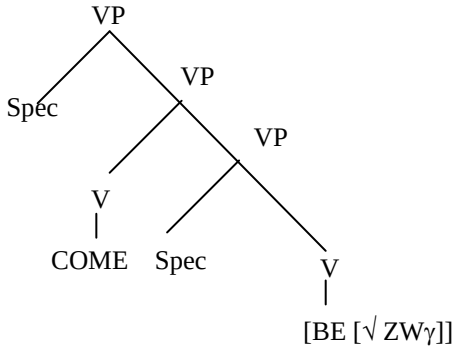
(3.27) a. **ES** b. **LS**



[COME *x* [BE [√ZWγ]]]

As in the previous situation, the constituents of the event structure indicated as e_1 and e_2 above will be substituted in the syntax by the abstract primitive constituents COME and BE respectively, yielding the following predicate-argument structure:

(3.28)



The inchoative form is discussed in more detail in Chapter 4.

3.5.2 Unaccusative verbs

In Chapter 1, I made a distinction between the inchoative verbs of quality introduced in the previous section, and unaccusative verbs such as *rrez* 'break' exemplified in (3.29a), which also refer to verbs of change, but which lack the simple stative (or accusative) alternative as evidenced by the ungrammaticality shown in (3.29b):

(3.29) a. T-errez tebburt
3f.sg.-break door
The door broke / is broken

b. *errez-itt tebburt
break-3f.sg.ACC door
The door is broken

Like the inchoative verb considered in the previous subsection, the unaccusative verb in (3.29a) may indicate either change of state or resultative state. Therefore, its ES and LS are also dyadic, similar to the one proposed for the inchoative verb *i-zwiγ* as illustrated (3.27) above. However, the fact that the unaccusative verb in (3.29) lacks the simple stative form suggests that such verbs have only the inchoative LS illustrated in (3.30a) while lacking the simple stative LS shown in (3.30b):

(3.30) a. [COME [BE *x* [√ RRZ]]]
b. [BE *x* [√ RRZ]]]

Unaccusative verbs are discussed in greater detail in Chapter 4.

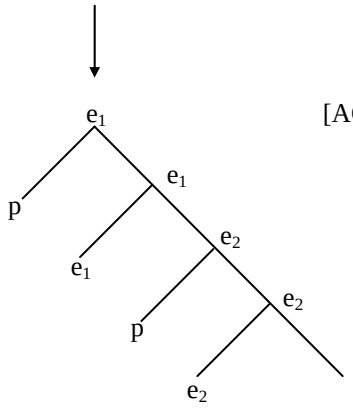
3.5.3 Verbs of spatial configuration

As stated in the first chapter, by unaccusative-disguised reflexives I refer to verbs of change of configuration such as those listed below:

(3.31)	qqim	'sit down'	qummec	'to squat'
	senned	'to lean against'	knu	'to bow'
	bedd	'to stand'	kker	'to stand up'
	tinez	'to bend'		

As will be shown in Chapter 6, verbs of spatial configuration such as those listed in (3.31) are acknowledged to involve an agentive interpretation. This is in addition to the inchoative and the resultative interpretations described in the previous sections with respect to unaccusative verbs. The agentive interpretation refers to the action undertaken by the bare argument in order to get in the specific position indicated by the verb. Following the notation adopted in the present work, I paraphrase the abstract verb involved in the agentive interpretation as ACT. Accordingly, I argue in Chapter 6 in favour of the ES and LS illustrated below, admitting for the moment the verbs BE and COME to have conflated into BECOME:

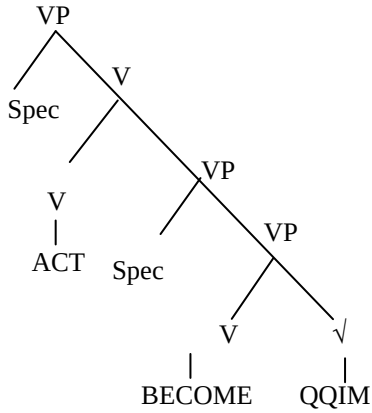
(3.32) a. **ES** b. **LS**



[ACT *x* [BECOME *x* [√qqim]]

Like in the previous situations, the mapping of the ES and the LS above yields the PAS illustrated below:

(3.33)



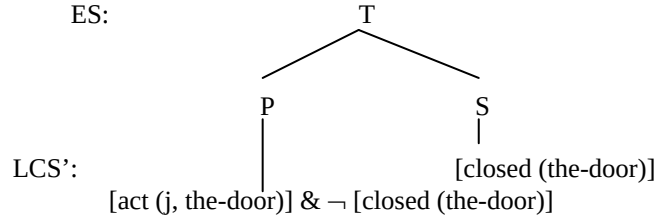
Unaccusative-disguised reflexives are discussed in more detail in Chapter 6.

3.5.4 Causative verbs

Causative verbs have been acknowledged in the literature to have a dyadic ES and LS, composed of a CAUSE subcomponent and a RESULT subcomponent. Consider for instance the structure in (3.34b) below, proposed by Pustejovsky (1991: 58) for the sentence in (3.34a):

(3.34) a. John closed the door

b. ES:



LCS: cause ([act (j, the-door)] become [closed (the-door)]

As already highlighted in Chapter 1, there are two types of causative verbs in Tamazight, which correspond to those known across languages as

lexical and morphological causatives (see Dixon 2000 and Shibatani & Pardashi 2002). Morphological causative verbs of change are derived from unaccusative verbs by means of the causative morpheme SS- as shown in (3.35):

(3.35) a. T-bwwa lqahwa (unaccusative)
3f.sg. cook coffee
The coffee is ready

b. Y-ss-bww Aksel lqahwa (Causative)
3m.sg.caus.make Aksel coffee
Aksel has made (some) coffee

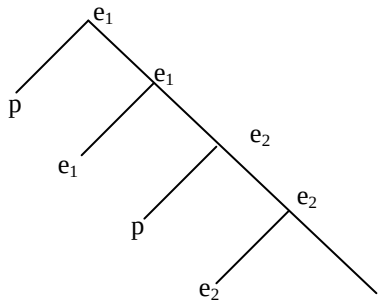
Morphological causatives contrast with lexical causatives, which do not display the causative morpheme as illustrated with the verb *ldi* 'open' in (3.36):

(3.36) a. T-lli tewwurt (unaccusative)
3f.sg.open fs.door
The door is open / opened

b. Y-lli Aksel tawwurt (Causative)
3m.sg.open-perf. Aksel fs.door
Aksel opened the door

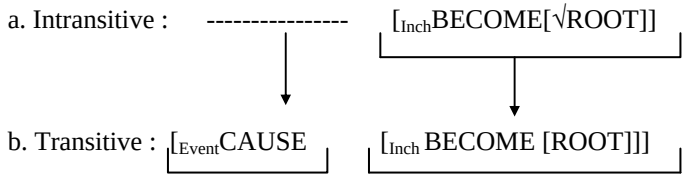
Assuming that both types of causatives (3.35b) and (3.36b) have a dyadic structure composed of a CAUSE component and a RESULT subcomponent, I represent their ES as follows:

(3.37)



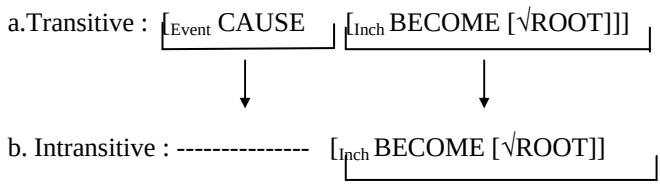
However, as I argue in Chapter 6, the LS structure corresponding to the morphological causative in (3.35b) is basically intransitive. Therefore, it is derived by augmenting the LCS of its unaccusative counterpart in (3.35a) with the causative subcomponent in the way illustrated below:

(3.38) *SS-causativization:*



By contrast, the LS of the lexical causative in (3.36b) is basically transitive. Accordingly, it is the LS of the intransitive alternate that is derived by reducing the transitive structure in the manner illustrated below:

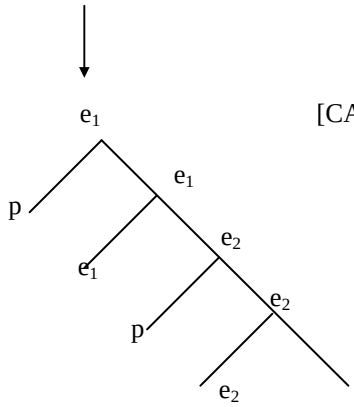
(3.39) LCS of *lexical causatives*:



The structures above are discussed in more detail in Chapter 7.

The question of whether the derived structures (3.38b) and (3.39b) are lexicalised at the LS level or whether only their basic counterparts (3.38a) and (3.39a) are lexicalised is not relevant. What is relevant is the fact that when the projected ES is causative, it will be expressed with the appropriate LS, which corresponds to the causative verb in both situations as illustrated below:

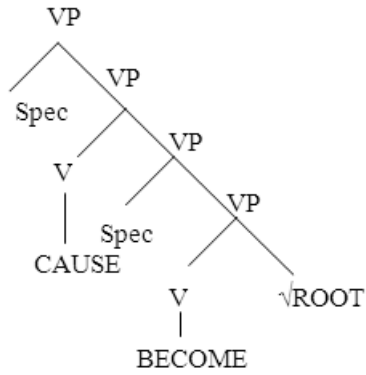
(3.40) b. **ES** b. **LS**



[CAUSE*x*[BECOME *x* [√ROOT]]

As in the previous situations the mapping between the LS and the ES in (58) yields the syntactic PAS illustrated below:

(3.41)



Causative verbs are discussed in more detail in Chapter 7.

3.6 Conclusion

In the present chapter I have first provided an overview regarding the way event structure, lexical structure and predicate-argument structure have been considered in the literature. I outlined the model of the organization of the grammar adopted in the present dissertation and specified the levels of representations of ES, LS and PAS. I also showed how the approach suggested here applies to the different classes of verbs of (change of) state under investigation. In the next chapters I delve into the details by considering each class of verbs individually.

CHAPTER FOUR

VERBS OF QUALITY AND UNACCUSATIVE VERBS

4.1 Introduction

In the present chapter I examine two classes of intransitive verbs indicating state and change of state, which I referred to as verbs of quality and unaccusative verbs in the previous chapters. To recapitulate, verbs of quality have two distinct forms. Firstly, the form exemplified in (4.1a), which I referred to as pure stative or accusative, and secondly, the one exemplified in (4.1b), which I termed inchoative or nominative:

(4.1) a. Zeggaγ-it
Red.perf-3m.sg.acc.
It / he is red

b. I-zwiγ
3m.sg.nom.-red.perf
It / he has become red

The simple stative form in (4.1a) always indicates a pure state with no reference made to a prior event that has led to it. By contrast, the inchoative form in (4.1b) may indicate either a state resulting from a prior event, or the process of change leading to the current state, depending on the context. I argue in § 2.3 below that these two interpretations are distinguished with the help of an operator within the syntactic structure which is associated with two different scope positions. Verbs of quality are dealt with in § 2.

In other dialects than Kabyle Tamazight, the simple state (or accusative) form in (4.1a) has been lost in favour of the inchoative (or nominative) form in (4.1b). This is for instance the case in Tashelhiyt Tamazight (spoken in the south of Morocco) where verbs of quality occur with nominative clitics only. However, and curiously enough, the verb

stem of the verb *zwγ* in Tashelhiyt, exemplified in (4.2) below, differs morphologically from the AZK inchoative form exemplified in (4.1b):

(4.2) I-zeggaγ (Tashelhiyt, nominative)
CL.3m.sg.nom.-red
It / he became red

I argue in Section 3 that the Tashelhiyt form in (4.2) and the AZK form in (4.1b) are associated with two different types of aspects.

In contrast to verbs of quality, unaccusative verbs have only the inchoative form as illustrated with the verb *rγ* 'burn' in (4.3a) while lacking the simple stative form such as the one exemplified in (4.1a) as evidenced by the ungrammaticality of the sentence in (4.3b):

(4.3) a. T-rγa lqahwa-ya
3f.sg.-burn coffee-this
This coffee is burning / too hot

b. *Rγa-t lqahwa-ya
Hot.3f.sg.nom. coffee-this
This coffee is too hot

Like the inchoative form of verbs of quality exemplified in (4.1b), the unaccusative verb in (4.3) may also indicate either a state resulting from a prior event, or the process of change of state leading to it, depending on the context. I argue in § 4 that unaccusative verbs share the same structure as the inchoative form of verbs of quality.

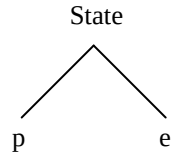
4.2 Verbs of quality

In the present section I examine the ES, the LS and the PAS associated with the simple stative and the inchoative forms of verbs of quality exemplified in (4.1).

4.2.1 Simple statives

As mentioned in the previous chapter, the simple stative (accusative) form exemplified in (4.1a) has a monadic event structure of the STATE type illustrated in (4.4a) below, where *e* and *p* mean head and participant of the event respectively, and a monadic LS composed of the abstract verb BE and a lexical root represented in (4.4b):

(4.4) a.

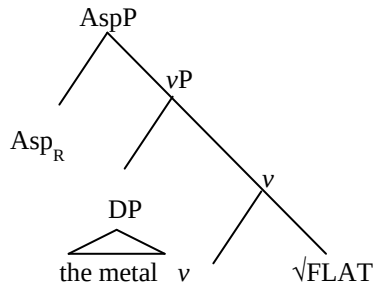


b. [BE *x* [√ROOT]]

In the approach outlined in Chapter 1 I adopted the idea that lexical roots merge with V. The idea that lexical roots merge directly with the head V is defended by Embick (2004: 374) with respect to deadjectival verbs. Embick proposes that the eventive and the resultative interpretations associated with the verb *flatten* in (4.5a) and (4.5b) have the structure illustrated in (4.5c):

(4.5) a. The metal flattened
b. The metal is flattened

c.



In the structure represented in (4.5c), the inchoative *v* selects the root √FLAT. The verb and the root conflate in order to yield the lexical verb *flatten*, while the DP *the metal* in [spec, *v*P] is interpreted as the internal argument. Embick (2004: 367) adopts the structure in (64c) for the passive participles exemplified in (4.6a) and (4.6b):

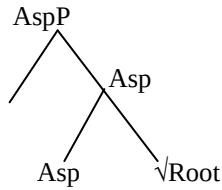
(4.6) a. The door is opened
b. The metal is hammered

Embick (2004: 363) proposes that the sentences in (4.6a) and (4.6b) contrast with their simple stative counterparts exemplified in (4.7a) and (4.7b) below, respectively:

(4.7) a. The door is open
b. The metal is flat

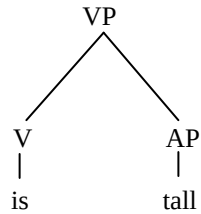
Embick argues that the stative predicates in (4.7a) and (4.7b) lack head *v*, which contrasts them with the passive participles in (4.6a) and (4.6b) which do have one. Accordingly, he proposes that in the sentences in (4.7) the lexical root conflates directly with aspect as illustrated with the structure represented below (Embick's 2004: 363, (23)):

(4.8)



The structure above proposed by Embick contrasts with the one represented in (4.9b) proposed by Ouhalla (1994: 31 (67b)) for the adjective predicate exemplified in (4.9a):

(4.9) a. John is tall
b.

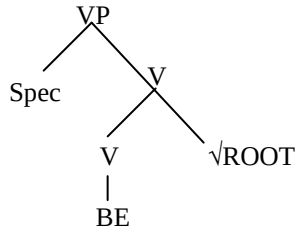


The auxiliary verb BE in the English sentences in (4.7a-b) and (4.9a), it may be argued, is not a verb but simply the spelling out of tense. However, such an argument does not hold with the Tamazight simple stative verb of quality illustrated in (4.2a), reproduced below as (4.10), because the form zeggaɣ is a verb and not an adjective:

(4.10) Zeggaγ-it
Red.perf-3m.sg.acc.
It / he is red

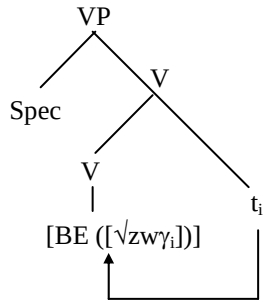
Therefore, as far as the simple stative verb exemplified in (4.10) is concerned, the structure represented in (4.9b) has the advantage of showing the stative verb BE, which confers the category feature [+V] to the lexical root. Embick's hypothesis that the lexical root in (4.8) merges directly with Aspect would leave the lexical root in theTamazight verb in (4.10) without the category feature [+ V]. For this reason, I adopt the structure represented in (4.9) over the one proposed by Embick, represented in (4.8). In view of these remarks, I propose that the mapping of the monadic ES and the LS represented respectively in (4.4a) and (4.4b) for the simple stative sentence in (4.10) yield the following monadic PAS:

(4.11)



In the structure above, the lexical root, which contains only semantic features, is generated as the complement of the abstract verb BE. The two elements are then conflated together in the following fashion:

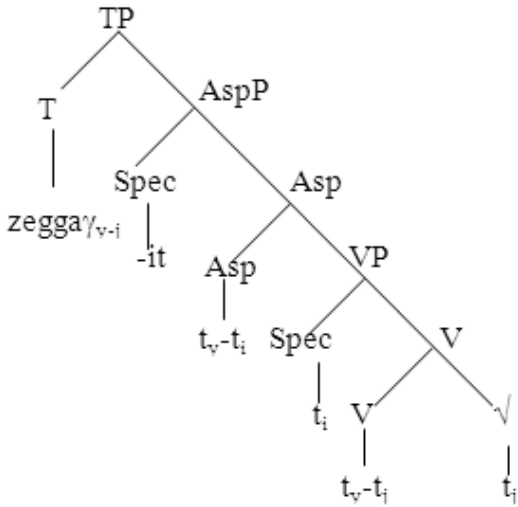
(4.12)



In order to give a full representation of the simple stative verb in (4.10) I have to consider the rest of the elements involved in the structure such as aspect and the accusative clitic *–it*. I argue in Chapter 5 that accusative

clitic -*it* is an argument, and as such, it is generated in the specifier position of the abstract verb BE. Following the proposal made by Travis (2000) that features of the object arguments are checked in Spec of Aspect, as opposed to features of subject arguments, which are checked in the spec of T, I assume that the clitic –*it* subsequently moves to the specifier position of Aspect where it checks the accusative case feature. At this level, the syntactic structure under derivation looks as follows:

(4.13)



I return to the structure above in Chapter 5 devoted to the position of clitics, where I consider the possibility that the verb *zeggaγ* and the accusative clitic –*it* move to C and Spec of T, respectively.

4.2.2 Inchoatives

In the present subsection I consider the ES, the LS and the PAS associated with inchoative (or nominative) form of verbs of quality exemplified below, which is a reproduction of the example in (4.2) above:

(4.14) I-zwiγ
3m.sg.nom.-red.perf
It / he has become red

As previously mentioned, the inchoative form exemplified in (4.14) may yield either an inchoative or a resultative interpretation depending on the context. Resultative interpretation is a property of verbs of change (of state) indicating a transition from a state to another. Verbs of change are known to have a dyadic event structure composed of two subevent components, one of which indicates the transition process, while the other indicates the resulting state. The inchoative form in (4.14) is therefore to be compared with the English inchoative sentence exemplified in (74a) as opposed to its stative counterpart exemplified in (4.15b):

(4.15) a. The soup cooled
b. The soup is cool

It has been acknowledged in the linguistic literature (Lakoff 1965; Dowty 1979; Jackendoff 1983, 1990; Pinker 1989 among many others) that the semantics of the sentence (4.15a) contains an abstract inchoative verb or operator with the same role as the verb 'become' involved in the sentence (4.16) below:

(4.16) The soup became cool

Using the change-of-state T-calculus formulated by von Wright (1963; 1968), Dowty (1979: 75) defines the abstract operator BECOME involved in the sentence (4.15a) as follows:

(4.17) BECOME (P) = $_{\text{def.}}\neg pTp$

In the definition above *p* refers to a state; the symbol ¬ to negation; and T to a dyadic operator paraphrased as "And NEXT". Remember from the previous chapter (see Chapter 3, § 3.4.1.2) that Pustejovsky (1995: 53) adopts a similar view in his discussion of the inchoative sentence below:

(4.18) The door closed

To recapitulate, Pustejovsky suggests that the semantics of the verb *close* include the transition from the predicate *not-closed* to the predicate *closed* of the same type as Dowty's (1979) operator BECOME. The structure given by Pustejovsky for such transition type events, which include accomplishments and achievements, was already presented in the previous chapter (§ 3.4.1.2). It is reproduced below as a refresher:

(4.19)

$$\left[\text{EVENTSTR}\ \left[\begin{array}{l} = \ E_1 = \text{process} \\ \quad\ E_2 = \text{state} \end{array}\right]\right]$$

Jackendoff (1990) expresses the same idea in his discussion of the difference between the state reading and the inchoative event reading associated with the sentences below:

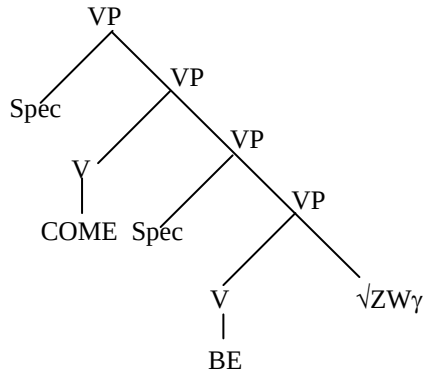
(4.20) a. The weathervane pointed north
b. The enemy surrounded the city
c. Bill stood on the table
d. Snow covered the hills

Jackendoff (1990: 75) argues that the "[inchoative] event reading describes a change taking place whose final state is the State reading — the familiar inchoative reading." He concludes that the inchoative interpretation has the dyadic structure in (4.21a) as opposed to the simple stative interpretation, which has the monadic conceptual structure in (4.21b):

(4.21) a. EVENT → [Event INCH ([State X])
b. STATE → [State X]

Both Pustejovsky's and Jackendoff's structures, illustrated above respectively as (4.19) and (4.21), contain two event subcomponents corresponding to the process of change and the resulting state. Following the approach outlined for inchoative verbs in Chapter 3, the two subevent components are matched with their corresponding abstract verbs, which I have been paraphrasing as BE and COME, in the lexical structure of the appropriate verb. The mapping of the event structure and its corresponding lexical structure yields the predicate-argument structure in the syntax of the type illustrated below:

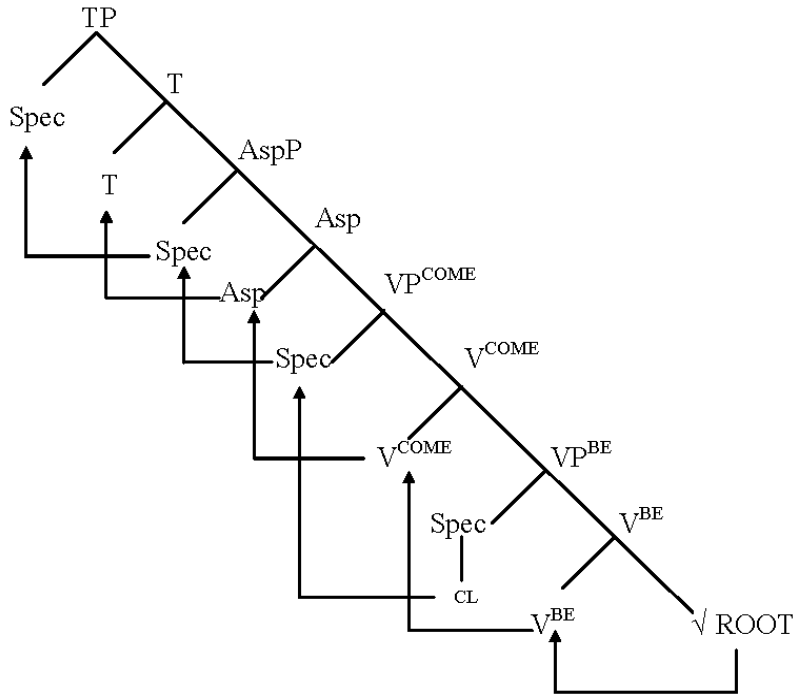
(4.22) Inchoative



Like in the stative situation dealt with in the previous section, the lexical root √ZWγ in (4.22) conflates with the abstract verb BE yielding [BE ([√ZWγ])]. The complexthat is formed as a result subsequently conflates with the verb COME yielding a structure [COME [BE ([√ZWγ])]]. As described in the previous subsection, in the case of the simple stative form the syntactic structure above will be augmented with other syntactic material such as Aspect and Tense.

In the inchoative form that is presently being discussed, the clitic, which corresponds to the logical object (internal argument), surfaces in the prefix position, which means that it has to be higher than the verb. Supposing the verb is under T, the candidate position to host the nominative clitic *i-* is Spec of T. Considering for the time being that the abstract features corresponding to the clitic *i-* are base-generated in the spec of the lower verb BE, the complete structure of the nominative form *i-zwiγ* will look as follows:

(4.23)



Unlike the accusative clitic *–it* dealt with in the previous section, which occurs as a suffix, the nominative clitic *i-* in (4.23) has to move to the spec of T to surface as a prefix. Given that the same dyadic structure in (4.23) may indicate either an inchoative interpretation or a resultative (stative), it is important to determine how these two interpretations are distinguished in structural terms.

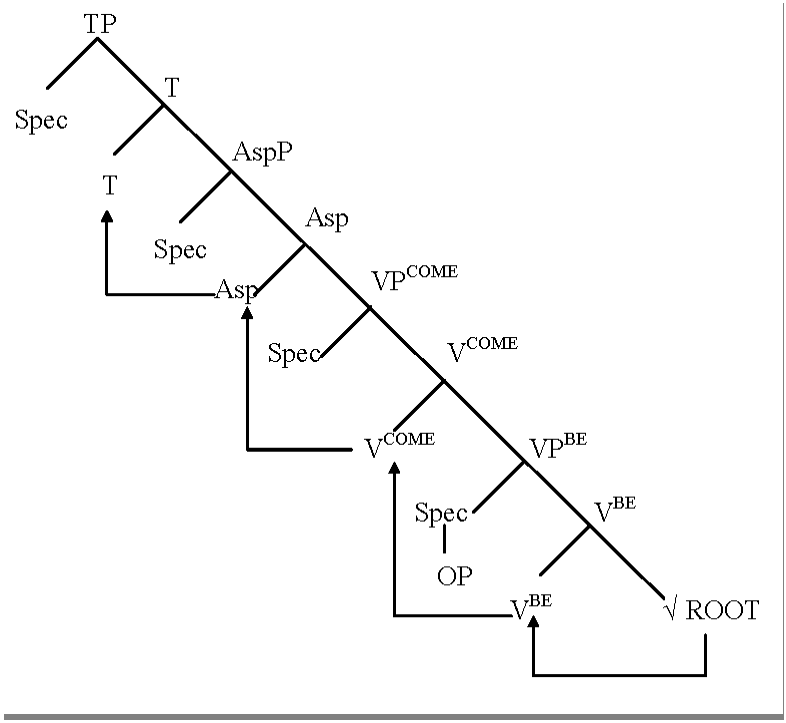
4.3 The resultative and the inchoative interpretations

As already mentioned in the introduction, the inchoative form of verbs of quality discussed in the previous subsection may have either a stative or an inchoative interpretation. In the present section I argue that the structure proposed in (2.23) for the form *i-zwiγ* is associated with an operator with

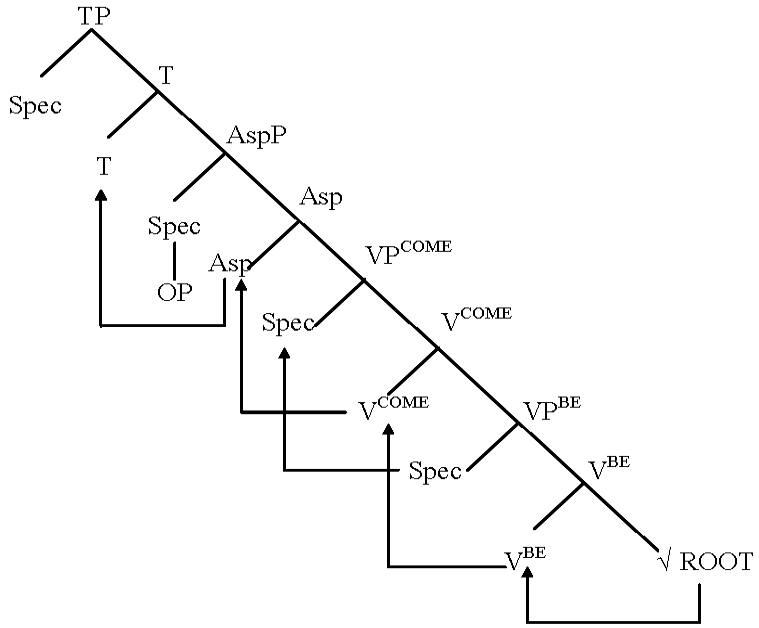
two different scope options. If the operator has scope over the higher verb COME, the structure yields the inchoative interpretation; if on the other hand the scope of the operator is restricted to the lower verb BE it yields the resultative interpretation. Such an operator-based approach has for instance been adopted in the literature to account for the difference between stage-level and individual-level interpretations (Diesing 1992; Kratzer 1995; Chierchia 1995 among others). For instance, Chierchia (1995) defends the idea that when a predicate has an individual-level interpretation, the operator is located in the domain of VP. However, if the interpretation corresponds to stage-level, the operator raises to the domain of Aspect.

Following Chierchia, I further assume the operator to be in the Spec position of the lower VP when the interpretation is stative and in the Spec position of ASP when the interpretation is inchoative. Accordingly, the structure represented in (4.23) for the inchoative form *i-zwiɣ* will look like (4.24) when the interpretation corresponds to the resulting state, and like (4.25) when the interpretation is inchoative:

(4.24)


TP
Spec
T
T
AspP
Spec
Asp
Asp
VP^COME
Spec
V^COME
V^COME
VP^BE
Spec
OP
V^BE
V^BE
√ ROOT

(4.25)



Like in the structure proposed for the stative form in § 2.1, the lexical √ROOT conflates with the verb BE to yield the stative lexical verb whose structure is [BE ([√ROOT])]. As previously mentioned, the complex [BE ([√ROOT])] further conflates with the inchoative verb COME to yield [BECOME ([√ROOT]]]. However, adopting such an assumption for the structure in (2.24) seems to compromise the resultative state interpretation in the sense that it would drive the abstract verb BE out of the lower stative VP which is the scope domain of the operator. Two different solutions are available in order to solve this problem depending on whether or not we allow a ‘‘de-conflation’’ process between the lexical root and the stative verb BE to take place. The first solution would be to keep the stative V^{BE} within the scope of the operator, while allowing the root to conflate with the V^{COME}. Applying this hypothesis to the inchoative verb BECOME, supposedly derived from the incorporation of BE onto COME, we would obtain a structure that is similar to [COME [Op [BE]]] whereby the stative verb BE is still within the scope of the operator at the surface level. Such a verb structure exists in the English periphrastic form

COME TO BE, which has also been adopted in the past as the LCS of verbs of change of state. For instance, Guerssel (1986) proposed the LCS shown in (4.26b) for verbs of change, as opposed to the one in (4.26a) proposed for simple stative verbs:

(4.26) a. [*x* BE IN STATE *y*]
b. [*x* COME [TO BE IN STATE *y*]]

Unlike the structure I proposed in (24) where the verb BE conflates with the verb COME, the stative verb in (4.26b) remains within the scope of the lower VP, thus accounting for the resultative interpretation.
The alternative solution would be to accept the idea that the stative BE conflates with COME in the syntax as shown in (4.24), while assuming some kind of reconstruction to take place subsequently at LF. Reconstruction is a syntactic phenomenon applying at LF to elements derived by movement (Hornstein 1984, Barss 1986, Chomsky 1995 and Aoun & Benmamoun 1998). It means, "the moved phrase [is] treated "as if" it were in the position of its trace." (Chomsky 1995: 71). Viewed this way, the stative interpretation of the nominative form we are seeking to account for here is an LF property.
Having explained how the resultative and the inchoative interpretations are distinguished on the basis of the operator, I will now investigate the differences between the AZK inchoative form *i-zwiɣ* and the Tashelhiyt inchoative form *i-zeggaɣ*.

4.4 Dialectical variation between two nominative forms

As already mentioned in the introduction, the accusative form of verbs of quality has been lost in Tashelhiyt Tamazight in favor of the inchoative form. However, as shown below, the morphology of the inchoative form in Tashelhiyt is different from the AZK one considered previously. The AZK simple stative form is given in (86c) for comparison:

(4.27) a. I-zeggaɣ (Tashelhiyt, inchoative)
CL.3m.sg.nom.-red
It / he reddened

b. I-zwiɣ (AZK, inchoative)
CL.3m.sg.nom.-red
It / he reddened

c. Zeggaγ-it (AZK, simple stative)
Red perf.-CL.3m.sg.
It is red

The Tashelhiyt form has the same inchoative prefix *i*-as the one involved in the AZK inchoative form, but the forms differ with respect to the morphology of verb stem. The Tashelhiyt form *i-zeggaγ* has the same verb stem as the AZK simple stative form *zeggaγ-it*, but they differ with respect to the clitics involved. The idea I will explore here is that the difference between the two stems *zeggaγ* (4.27a, c) and *zwiγ* (4.27b) is aspectual in the sense that they indicate two types of perfective aspect. Following a general phonological rule in the language, the palatal sound *gg* appearing on the stem *zeggaγ* in both the Tashelhiyt inchoative form and the AZK simple stative form results from the reduplication of the second consonant *w* of the lexical root √ZWγ. The reduplication involved here corresponds to the strategy used in the language to derive the perfective aspect with verbs of quality when they occur in the accusative form. Compare for instance the accusative forms of the verb roots listed below with their nominative counterparts in Kabyle Tamazight:

(4.28)

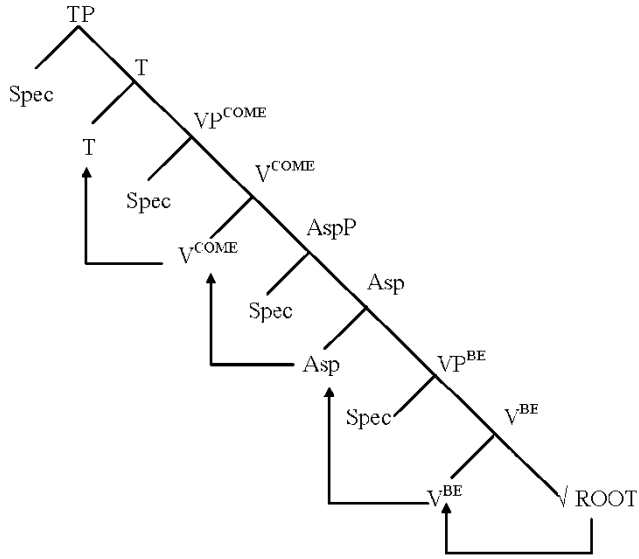
Root	Simple stative	Inchoative	
√zwγ	zeggaγ	izwiγ	(be red)
√mγr	meqqar	imγur	(be big; grown up)
√γzf	γezzif	iγzif	(be tall; long)
√wzl	wezzil	iwzil	(be small)
√brk	berrik	ibrik	(be black)

As seen from the table above, reduplication in Kabyle Tamazight applies only in the simple stative, not in the inchoative form. The situation in Kabyle Tamazight contrasts with the situation in Tashelhiyt where the reduplicated form *zeggaγ* is used with the inchoative form. Although the possibility of combining verbs of quality with accusative clitics in Tachelhiyt Tamazigh has been lost, the reduplication strategy deriving the perfective aspect with accusative forms has been retained.

Taking into consideration the aspectual differences just highlighted, I now turn to the differences between the syntactic structures associated with the Tashelhiyt and the AZK inchoative forms. The idea that a syntactic structure may be associated with two different types of aspect is a familiar strain inthe literature. For instance, in her discussion of causatives in Tagalog, Travis (1992) suggests that lower V is associated with inner aspect, while higher V is associated with outer aspect. Without

necessarily subscribing to the idea that the same structure contains both aspects, dubbed inner and outer aspect by Travis, the idea I adopt here[1] is that there is only one aspect headwhich is equipped with two types of morphosyntactic features, selecting two different types of verbs. One type of aspect selects the stative verb V^{BE}, while the other selects the inchoative verb V^{COME}. If Aspect selects the stative V^{BE}, the perfective is indicated with reduplication as in the form *zeggaɣ*. If on the other hand Aspect selects the inchoative V^{COME}, the perfective is indicated with vowel alternation as in the form *i-zwiɣ*. The fact that both the Tashelhiyt inchoative form *i-zeggaɣ* and the AZK simple stative form *zegga-it* have the same aspectual morphology means that they are associated with the same type of stative aspect. By contrast, the AZK nominative form i-*zwiɣ* is associated with inchoative or non-stative aspect. According to this analysis, the Tashelhiyt form i-*zeggaɣ* will have the syntactic structure represented in (4.29), which contrasts with the structure in (4.30) associated with the AZK inchoative form *i-zwiɣ*[2]:

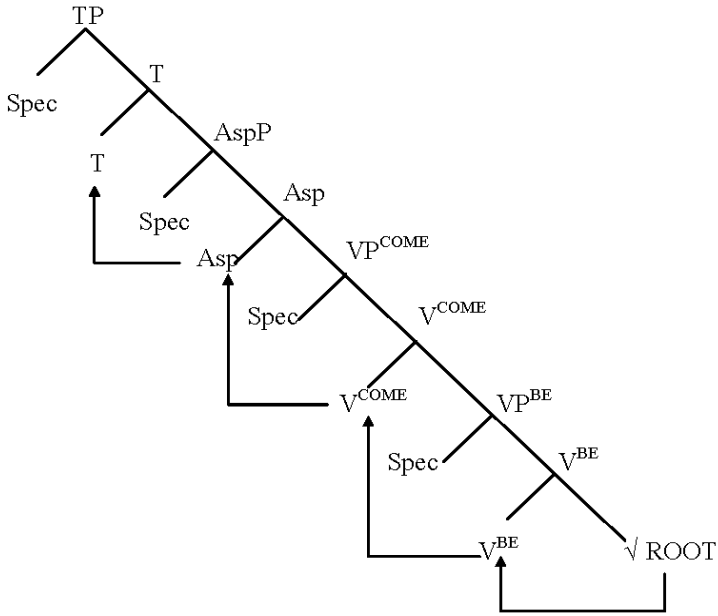
(4.29)



1 Suggested to me by M.L. Rivero.

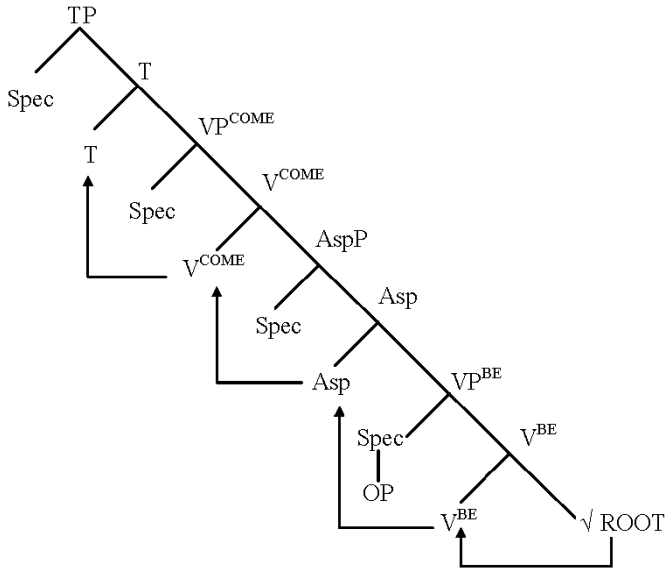
2 The clitic *i-* associated with the verb forms is omitted in both structures; it will be dealt with in the following chapter.

(4.30)



Like in the situation with the AZK form *i-zwiγ* considered previously, the structure associated with the Tashelhiyt inchoative form *i-zeggaγ* may yield two different interpretations, corresponding to a resultative or an inchoative interpretation depending on the context. Therefore, its structure must also contain the same type of operator as the one postulated for the form *i-zwiγ*. In order to distinguish between the two interpretations, the operator has to have two different scope domains in the same way as suggested in the previous section with respect to the AZK form *i-zwiγ*. Accordingly, taking into consideration the structure in (4.29), I will assume the operator to be located in the Spec of VP^{BE} when the interpretation is resultative as shown in the structure below:

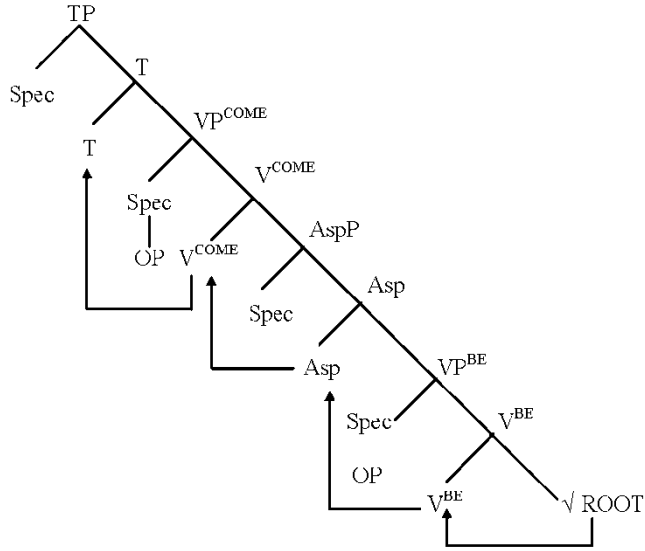
(4.31)



In the structure associated with the inchoative interpretation proposed in (4.24) above for the inchoative AZK form *i-zwiɣ*, the operator is located in the spec of Aspect. Given that the nominative clitic in the form *i-zwiɣ* shows up as a prefix, it is reasonable to assume at this level of discussion that this nominative clitic is in the [Spec, TP].

Unlike the AZK situation, the operator associated with the inchoative interpretation in Tashelhiyt cannot be located in the spec of Aspect, otherwise the operator would fail to have scope over the inchoative abstract verb V^{COME}, the latter being higher than ASPECT as shown in (4.31). This remark suggests that the operator must be in a position higher than V^{COME}. Two possibilities are available: the spec position of V^{COME} as shown in (4.32) or the spec of T as illustrated in (4.33):

(4.32)


TP
Spec
T
T
VP^COME
Spec
OP
V^COME
V^COME
AspP
Spec
Asp
Asp
VP^BE
Spec
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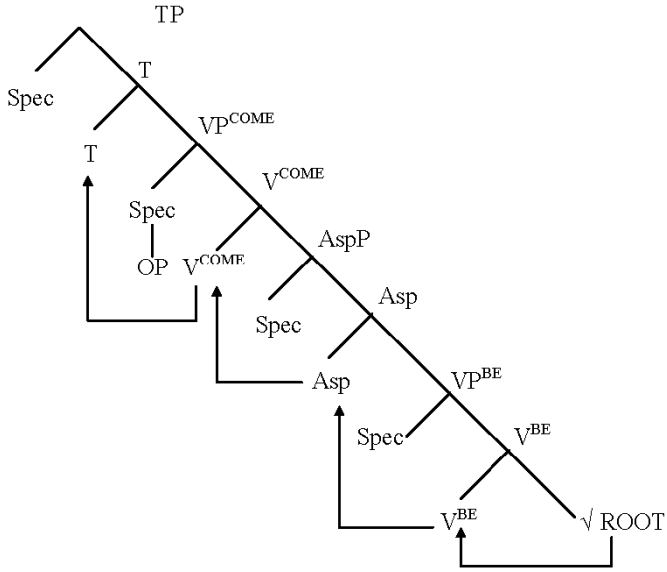
V^BE
V^BE
√ ROOT

(4.33)


TP
Spec
T
T
VP^COME
Spec
OP
V^COME
V^COME
AspP
Spec
Asp
Asp
VP^BE
Spec
V^BE
V^BE
√ ROOT

The analysis of the different structures presented in this chapter will be extended in the following chapter, which focuses on the position of clitics.

4.5 Unaccusative verbs

The inchoative verbs of quality dealt with in the previous sections contrast with other intransitive verbs of change that lack the simple stative (or accusative) form. Compare, for instance, the verb of quality exemplified in (4.34), which has both the accusative and the nominative forms exemplified in (4.34a) and (4.34b) with the unaccusative verb in (4.35) which has only the nominative form exemplified in (4.35b) (the accusative form in (4.35a) not being an option):

(4.34) a. Semd-itt lqahwa-ya
Cold-3.f.sg.acc. coffee-this
This coffee is cold

b. Tismid-d lqahwa-ya
3.f.sg.nom.cold-particle. coffee-this
This coffee has cooled off

(4.35) a. *Rγa-tt lqahwa-ya
Hot.3f.sg.nom. coffee-this
This coffee is too hot

b. T-rγa lqahwa-ya
3f.sg.-burn coffee-this
This coffee is burning / too hot

In order to highlight this difference, I refer to the form of verbs of quality exemplified in (4.34b) as inchoative verbs, while terming examples such as in (4.35b) unaccusative verbs. These lack the accusative (or pure stative) form. Both the inchoative verb of quality in (4.34b) and the unaccusative verb in (4.35b) obtain their causative counterparts by means of the morpheme SS as shown respectively in (4.36a) and (4.36b):

(4.36) a. I-ss-ismid-d Aksel lqahwa-nni
3.f.sg.caus.nom.cold-particle Aksel coffee-deic
Aksel has cooled off the coffee

b. I-ss-rγ-d Aksel lqahwa-ya
3.f.sg.caus-burn-prticle Aksel coffee-this
Aksel has overheated this coffee

The unaccusative verb in (4.35b) has the same LS structure as the one proposed for inchoatives in § 2.2, which is represented below:

(4.37) $[_{Inch}$ COME $[_{State}$ BE ([√ROOT])]]

As in the situation with inchoatives, the unaccusative verb in (93a) may indicate either change of state or resultative state, depending on the context. These two interpretations are accounted for with the same analysis proposed for inchoative verbs in § 2.2.

As previously mentioned, the accusative (or simple stative) form has disappeared in other Tamazight dialects in favor of the inchoative form. However, in his discussion of verbs of state and change of state in one of these dialects[3], Guerssel (1986: 81) proposes the simple stative structure represented in (4.38b) for the verb *y-zyert* 'be long' exemplified in (4.38a):

(4.38) a. Y-zyert wfuli
3ms-be.long CS.string
The string is long

b. *zyert*: *x* BE LONG

There is a divergence here between our analysis and the one proposed by Guerssel. On one hand the verb *zyert* in (4.38a) is combined with the nominative clitic *y-* in the suffix position, which is the variant of the nominative clitic *i-* occurring with inchoative and unaccusative verbs seen previously. On the other hand, the structure in (4.38b) proposed by Guerssel parallels the one we proposed for pure stative (or accusative) verbs in § 2.1. In our analysis, the verb *y-zyert* exemplified in (4.38a) cannot have the pure stative structure illustrated in (4.38b) because we take the combination verbs of quality with the nominative clitic *i-* as a sign that the lexical structure of these verbs contains the inchoative verb COME, in addition to the stative verb BE.

Unlike verbs of quality, which have both the inchoative and the simple stative LS represented respectively in (4.39a) and (4.39b), unaccusative verbs have only the inchoative LS, which is the same as the one in (4.39b):

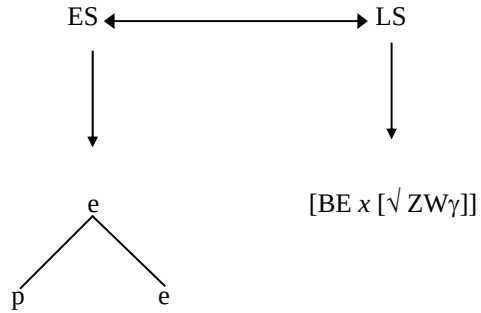
3. Ayt Seghrouchen Tamazight, spoken in central Morocco.

(4.39) a. $[_{State}$ BE ([√ROOT])]
b. $[_{Inch}$ COME $[_{State}$ BE ([√ROOT])]]

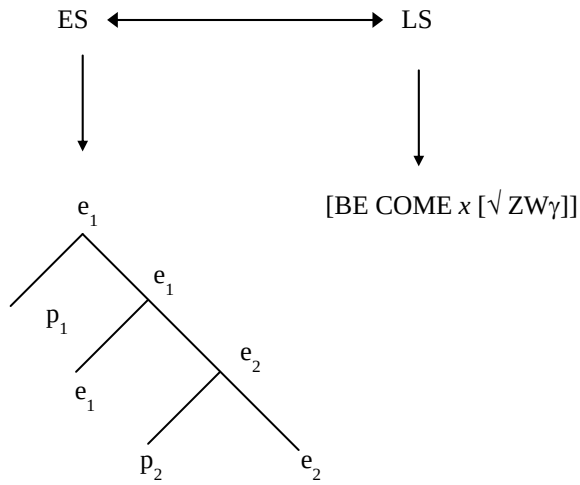
Consequently, inchoative verbs of quality and unaccusative verbs share the same type of structure represented in (4.39b), which accounts for their similarities as we have seen. As far as pure stative verbs of quality in Kabyle Tamazight are concerned, choice between (4.39a) and (4.39b) is determined by the type of event structure that is projected. If the event indicates simple state, the monadic LS in (4.39a) is selected. If on the other hand the event indicates change of state, the structure that is selected corresponds to the dyadic one in (4.39b).

Using the model of the organization of the grammar postulated in Chapter 3, we can illustrate the stative situation as in (4.40), and the inchoative with the unaccusative situations described as in (4.41):

(4.40) Stative:

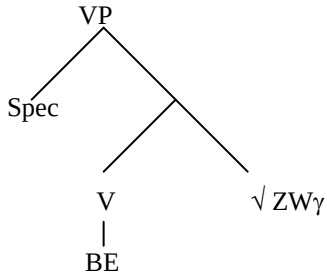


(4.41) Inchoative / unaccusative:

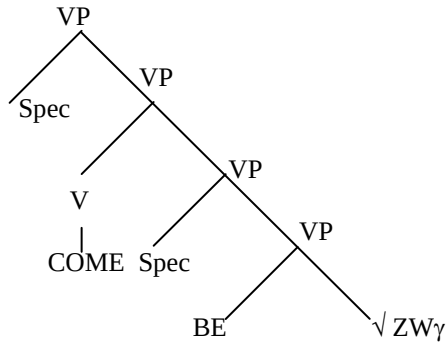


The mapping of the stative LS onto the ES in (4.40) yields the PAS represented in (4.42) below, while and the mapping of the inchoative ES onto its corresponding LS in (4.41) yields the PAS represented in (4.43):

(4.42) Stative



(4.43) Inchoative



4.6 Unaccusative / causative alternating verbs

The class of unaccusatives that we have dealt with form their causative counterpart by adding the causative morpheme SS to the intransitive base. This is clearly seen by comparing the intransitive examples in (4.34) and (4.35) with those in (4.36a) and (4.36b) respectively above. They contrast with another type of unaccusative verbs, which alternate with the causative counterpart as illustrated below with the verb *rrez* 'break':

(4.44) a. T-errez tebburt (unaccusative)
3f.sg.-break cs.door
The door broke / is broken

b. Y-rrza Aksel tabburt (causative)
3f.sg.-break Aksel fs.door
Aksel broke the door

Other causative-alternating unaccusatives are listed below:

(4.45)

ffer	'hide'	bnu	'build'
gzem	'cut'	aru	'write'
nγel	'spill'	sfed	'clean'
kkfu	'finish'	ccar	'fill'

Like the class of unaccusative verbs dealt with previously, unaccusative / causative alternating verbs also lack the simple stative (or accusative) form as shown in (4.46b):

(4.46) a. T-errez tebburt (unaccusative)
3f.sg.-break cs.door
The door broke / is broken
b. *errez-itt tebburt (stative / accusative)
break-3f.sg.acc door
The door is broken

Unlike the unaccusatives we have dealt with, which are derived by augmenting the stative structure, the class of causative-alternating unaccusatives is derived by reducing the causative component in the way illustrated below:

(4.47) LCS of *lexical causatives*:
a.Transitive : [$_{Event}$ CAUSE [$_{Inch}$ BECOME [√ROOT]]]
b. Intransitive : ---------- [$_{Inch}$ BECOME [√ROOT]]

Considered this way, the reason why causative-alternating unaccusatives lack the simple stative form becomes straightforward. Their semantic content does not indicate a simple state but a state that results from a change undergone by the (internal) argument. The analysis of unaccusative verbs presented here will be extended in Chapter 7, which is devoted to causative verbs.

CHAPTER FIVE

NOMINATIVE V. ACCUSATIVE CLITICS

5.1 Introduction

In the previous chapter I assumed that the accusative morpheme *–it* in (5.1a) and the nominative morpheme *i-* in (5.1b) are not agreement markers but internal arguments expressed as clitics:

(5.1) a. Zeggaγ-it
Red perf.-3.m.sg.acc
It is red

b. I-zwiγ
3m.sg.nom.-red
It / he reddened

In order to account for their respective prefix and suffix positions, I provisionally concluded that the accusative clitic in (5.1a) is in [Spec, Asp] and the nominative clitic in (5.1b) is in [Spec, TP]. In the present chapter I investigate the reasons that force the clitic in (5.1b) to surface in two ways: either a nominative subject in the prefix position, or as an accusative clitic in the suffix position in (5.1a). In passing, it is worth mentioning that the difference between the suffix and the prefix status of the clitics under consideration are not merely phonological. Given that both clitics correspond to internal arguments, if they were merely a phonological process they would both occur either as prefixes or as suffixes. What I would like to account for is why the clitic is forced to move to the nominative (subject) position but when it occurs in the accusative (object) position. As will be shown shortly, the reason for this movement is syntactic. The hypothesis I explore in Section 3 is based on the difference between the types of category T involved in each structure. As a background to the discussion provided in Section 3, I first present more evidence in Section 2 in favor of the clitic status of the subject morpheme *i-* occurring with the inchoative form in (5.1b). The conclusions

reached in the first three sections will give me the opportunity to elaborate further on the position of the nominative and the accusative clitics in Section 5.

5.2 Evidence in favor of the clitic status of the morpheme i-

The accusative clitic status of the suffix occurring with the simple stative form in AZK exemplified in (5.1a) is the same as the one occurring with transitive verbs where they are in complementary distribution with lexical objects as shown in the examples below:

(5.2) a. I-wwet Aksel ccir
3m.sg.nom-hit.perf. Aksel ball
Aksel hit the ball

b. Iwwet-it Aksel
3m.sg.nom-hit-perf.3m.sg.acc Aksel
Aksel hit it

In AZK, all the accusative clitics occurring with the simple stative form of verbs of quality as in (5.1a) coincide with those used with transitive verbs in the way exemplified in (5.2b). Unlike the accusative clitic *–it* in (5.1a), the clitic status of the nominative morpheme *i-* occurring in the prefix position as in (5.1b) is not so obvious because it is always compulsory; that is, it is not in complementary distribution with a lexical argument as illustrated with the examples in (5.3):

(5.3) a. I-wwet Aksel ccir
3m.sg.nom-hit.perf. Aksel ball
Aksel hit the ball

b. I-wwet ccir
3m.sg.nom-hit.perf. ball
He hit the ball

c. *wwet Aksel ccir
hit.perf. Aksel ball
Aksel hit the ball

In (5.3b) the lexical subject is omitted and the sentence is grammatical because the subject function is indicated by the nominative morpheme *i-*.

In (5.3c) however, the morpheme *i-* is omitted and the sentence is ungrammatical. What the sentence (5.3c) shows is that the subject morpheme is compulsory irrespective of the presence or absence of the lexical subject. Galand (1969) argues that the morpheme *i-* is the real subject while calling the lexical argument its referential or explicative complement.

Because such morphemes cannot be separated from the verb, they have often been viewed as agreement markers that are part of the verbal inflection, with the exception of Guerssel (1995) and Achab (2003). Guerssel (1995) provides evidence in favor of their clitic status on the basis of extraction out of clitic-doubled constructions. His analysis is reviewed in § 2.1. Achab (2003) on the other hand provides other types of evidence based on construct state nouns; which is reviewed in § 2.2.

5.2.1 Extraction out of clitic-doubled constructions

Guerssel (1995) first provides evidence showing that non-clitic-doubled object contructions allow extraction as illustrated in (5.4), by contrast with clitic-doubled constructions which disallows extraction as shown in (5.5):

(5.4) a. Walaγ amcic (Guerssel 1995: 121-22, (11))
Saw-1sg.cat
I saw the cat

b. Acu$_i$ ay walaγ t_i?
What that saw-1sg.
What did I saw

(5.5) a. Walaγ-t wemcic
Saw-1sg.-him cat
I saw [him] the cat

b. *Acu$_i$ ay t_i[1]-walaγ t_i?
What that him-saw-1sg. [Literally, "what did I see him?"]
What did I see him?

In Guerssel's view, extraction in (5.5b) is prohibited because the object *wemcic* doubles the clitic *–t*. Extending the extraction test to subjects,

1. The clitics *t-* in (123b) is displaced from the postverbal to the preverbal position because of the complementizer *ay* which acts as a clitic attractor in the language.

Guerssel pointed out that the subjects in (5.6) resist extraction as shown in (5.7) because they are also instances of clitic doubling:

(5.6) a. y-ssnw wryaz (Guerssel 1995: 121, (12))
3m.sg.cooked man
'The man cooked'

b. t-ssnw temttutt
3f.sg-cooked woman
'The woman cooked'

(5.7) a. *w ay y-ssnw? (Guerssel 1995: 124, (19a))
Who that 3m.sg-cooked.
Who cooked?

b. *w ay t-ssnw? (Guerssel 1995: 124, (20))
Who that 3f.sg-cooked.
Who cooked?

For extraction of subjects to be possible in (5.7a-b), Guerssel points out, a special neutral form of the verb, traditionally called participle, has to be used. Indeed, when the verbs in (5.7) are replaced with the participial form, extraction of the subject becomes possible as shown in (5.8):

(5.8) W ay y-ssnw-n? (Guerssel 1995: 124, (19b))
Who that cooked: neutral
Who cooked?

The particularity of the participial form in Tamazight such as the one in (5.8) is that it has default φ features, i.e. neutral with respect to person, gender and number. Derivation of the participial form obtains by suffixing the morpheme *n* to the 3sg.m. form of the verb in the way illustrated below:

(5.9) y-V-n

Guerssel (1995: 122) suggests that the participial form in (5.8) involves the discontinuous morpheme y---*n* and the verb *ssnw* 'cook'. He takes the discontinuous morpheme *y*---*n* to be a neutral subject clitic[2] in the sense

2. See Ouhalla (1993) for an alternative analysis whereby the discontinuous morpheme y---n is viewed as an anti-agreement morpheme.

that it has default value for φ-features. To accommodate the sentence in (5.8), which in fact is an instance of clitic doubling (with the principle prohibiting extraction out of clitic doubling constructions), Guerssel argues that extraction is not prohibited because of the clitic itself, but because extracted DPs leaves a trace with default φ-features. In other words, according to Guerssel, the sentences in (5.7) are ungrammatical because the default φ-features of the trace left by the extracted DP do not match those of the clitic, which is specified 3m.sg in (5.7a) and 3m.sg in (5.7b). The fact that the clitic chain involves a mismatch of features causes ungrammaticality. By contrast, the trace of the extracted DP in (5.8) does match those of the participle which are neutral, whence its grammaticality. A clitic chain is defined by Guerssel (1995: 123, (15)) as follows:

(5.10) *Definition of a clitic chain*: A clitic agrees in person, number, and gender features with the DP it is coindexed with. The clitic and the DP are said to form a clitic chain.

5.2.2 Evidence from construct state nouns

In the present subsection I provide evidence that the nominative subject morpheme *i-* showing as a prefix in (5.11) is base-generated as a head clitic:

(5.11) I-zwiγ (AZK, nominative)
3m.sg.nom.-red
It / he reddened

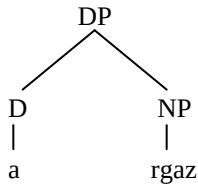
The analysis is restricted to third person singular (3sg) clitics for the sake of clarity. The difference between the 3sg clitics and rest of the paradigm is dealt with in Section 4. The view presented here is based on the analysis as published in Achab (2003), investigating the difference between two nominal forms traditionally referred to as *construct* and *free state*. A lexical subject is in construct state when it occurs post-verbally as exemplified in (5.12a), and in free state when it occurs pre-verbally as exemplified in (5.12b):

(5.12) a. **I-**čča **wrgaz**
3m.sg.eat cs.man
The man has eaten

b. **argaz I-**čča
fs.man 3m.sg.eat
The man has eaten

Drawing inspiration from Guerssel (1992), in Achab (2003) I defend the idea that the postverbal CS noun *w-rgaz* in (5.12a) is a bare NP while the preverbal FS noun *argaz* in (5.12b) is a full DP. I further argue that in Tamazight a nominal expression has to be a DP in order to be expressed syntactically. Accordingly, only FS nouns, which are DPs, can be projected in the syntax. By contrast, CS nouns, which are bare NPs, have to be selected by a head D for them to be legitimate syntactically. Applied to the examples in (5.12) above, the FS noun *a-rgaz* in (5.12b) is a DP whose head D is represented by the initial vowel *a*[3] as illustrated below:

(5.13)

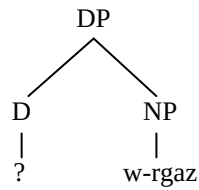


By contrast, the CS noun *w-rgaz* in (5.12a) is a bare NP whose representation is illustrated below:

(5.14)

For the NP in (5.14) to be projected syntactically, it needs to be selected by a head category D in the following fashion:

(5.15)



3. Likewise, Guerssel (1992) suggests that the initial vowel *a* corresponds to a default head marker, which he called Kase.

I argue in Achab (2003) that the head D in (5.15) corresponds to the subject morpheme *i-*, which subsequently incorporates onto the verb where it shows as a prefix. The reason why the morpheme *i-* raises to the subject position has to do the Extended Projection Principle (EPP) in the spirit of Nash and Rouveret (1999). The Extended Projection Principle stipulates that constructions involving inflected Tense involve a subject position that needs to be filled by a lexical element or morphological content including expletives. In the early version of the Government and Binding Theory, in languages with rich inflection(Tamazight is such a language)and optional overt lexical subjects, the subject position is supposed to host a null or an empty element. For this reason, such languages are sometimes *pro*-drop languages in Government and Binding (see Chomsky 1981). However, while the spirit idea has been maintained, it is reformulated by Nash and Rouveret (1999) in terms of D-feature borne by T which has to be checked for scope reasons. In the case of morphologically rich languages (*pro*-drop languages in Government and Binding terminology) Nash and Rouveret (1999: 9) argue that "the D-feature of T is exceptionally satisfied by the pronominal / argumental property of the verb inflection." Getting back to the idea whereby the morpheme *i* is viewed as a Determiner above, I argue in Achab (2003) that the CS noun *wrgaz* in (5.12a) is selected by the subject morpheme *i-* prior to its incorporation in the way illustrated below in (5.16):

(5.16)

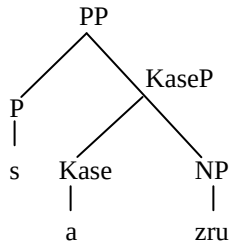
The arguments sustaining the analysis just laid out are based on the condition that a CS noun has to be adjacent to its head D for it to be selected as its complement as shown in (5.16a). More evidence for the adjacency relation between the two elements comes from other situations involving CS nouns. Compare for instance the sentence in (5.17a), which involves a FS noun, with the one in (5.17b), which involves a CS noun:

(5.17) a. I-wwet s **azru**
3m.sg.hit to fs.stone
He launched (something) towards the stone

b. I-wwet s **w-zru**
3m.sg.hit with cs.stone
He hit with a stone

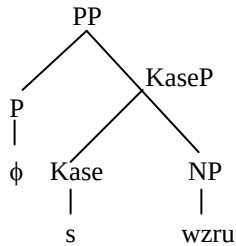
Guerssel (1986, 1992) argues that the element *S* in (5.17a) which has a directional meaning is a genuine preposition, while the one in (5.17b), which has the instrumental meaning, is a case marker. Accordingly, he treats the FS noun *azru* in (5.17a) as a KaseP, whose syntactic head is represented by the initial vowel *a*, considered a default morphological case marker. Guerssel concludes that the maximal projection KaseP is the complement of the preposition *s* in the way illustrated below:

(5.18)



By contrast, Guerssel considers the CS noun *wzru* in (5.18b) as the complement of the head Kase represented by the case marker *s*, while the maximal projection KaseP is seen as a complement of an empty preposition in the way illustrated below:

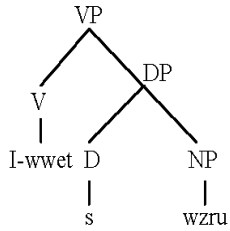
(5.19)



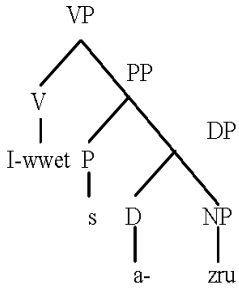
The view adopted by Achab (2003) is similar to Guerssel's with the difference that the head s in (5.17b) is viewed as a determiner head D rather than Kase. Consequently, unlike the DP [$_{D}$ a-[$_{NP}$ zru]] in (5.17a), which is the complement of the preposition *s*, the DP [$_{D}$ s[$_{NP}$ w-zru]] in (5.17b) is the complement of the verb *y-wwet*. Accordingly, the structures of the sentences (5.17a) and (5.17b) look like (5.20a) and (5.20b) respectively:

(5.20)

a.



b.



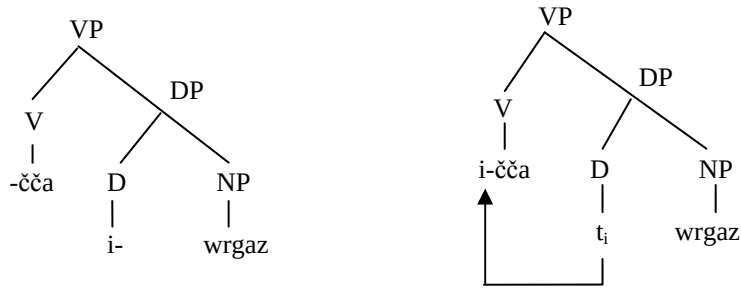
Let us now get back to the discussion of the subject morpheme *i-* to complete our argumentation. Compare the sentence (5.17b), reproduced as (5.21a) below, with the one in (5.12a) repeated as (5.21b) below:

(5.21) a. Yewwet s **wzru**
3m.sg.hit with CS.stone
He hit with a stone

b. **I-**čča **wrgaz**
3m.sg.eat CS.man
The man has eaten

Unlike the situation in (5.21a) where the CS noun *wzru* is adjacent to the head *s*, the CS noun *wrgaz* in (5.21b) is not adjacent to its head, which I supposed to correspond to the morpheme *i-*, the two being separated by the verb stem *–čča*. Given the adjacency condition holding between the NP and its head D, I assume that the subject morpheme *i-* is base-generated as the head D in the way illustrated in (5.16), repeated below as (5.22):

(5.22)



In (5.22a) the head *i-* and its CS complement *wrgaz* are adjacent. In (5.22b) the determiner *i-* is incorporated onto the verb, leaving a trace in its original position. In order to give more support to the idea that the morpheme *i-* is indeed a clitic incorporated onto the verb, let us consider the participial form. As already mentioned in the previous subsection, the participial form in Kabyle Tamazight is invariable with respect to person, gender and number. It is derived by adding the (aspectual) suffix *–n* to the third masculine singular form of the verb. That is, the subject morpheme *i-* appears as a prefix and the participial morpheme *n-* appears as a suffix in the way illustrated in (5.23):

(5.23) win **i**-ččа-**n**
Who 3m.sg.eat.part
That who has eaten

There are two possible ways of expressing the proposition in (5.23) when negation is added. The standard way of expressing the negative counterpart is by adding the negation *ur* before the verb as shown in (5.24):

(5.24) Win ur **i**-čči-**n** (ara)
Who NEG 3m.sg- eat-part (not)
The one who has not eaten

However, in the Kabyle Tamazight variety, there exists an alternative form to (5.24) where the morpheme *n* appears as a prefix in the place of the morpheme *i-*. This possibility is illustrated below:

(5.25) Win ur **n**-ċċi (ara)
That who NEG part-eat
That who has not eaten

What the negative participial forms in (5.24) and (5.25) show is that the morpheme *i-* is not an inflectional element of the verb since it may be supplanted with the participial morpheme. In Achab (2003) I took this to suggest that this morpheme is a clitic rather than a 'fossilized' inflectional morpheme. I concluded that the movement of the subject morpheme *i-* into the preverbal position has to do with the Extended Projection Principle in the way explained above (see the discussion of the EPP following the structure given as (5.15) above). Having clarified the clitic status of the nominative subject morpheme *i-*, I am now in a more comfortable position to explore the differences between the nominative and the accusative clitics occurring with verbs of quality. This will be the topic of the next section.

5.3 Difference between the nominative and the accusative forms

Let us consider again the pure stative (or accusative) and the inchoative (or nominative) forms of verbs of quality in (5.26a) and (5.26b) below respectively:

(5.26) a. Zeggaγ-it
Red (PERF) -CL. 3M.Sg.
It is red

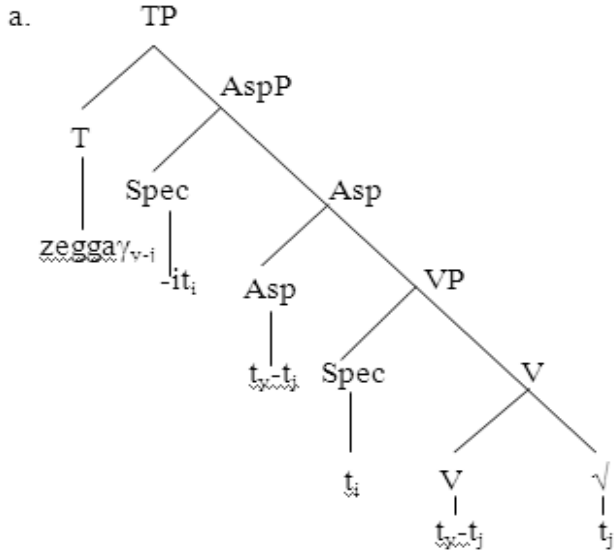
b. I-zwiγ
CL.3M.Sg.NOM.-red
It / he reddened

Both the accusative object clitic *–it* in (5.26a) and the nominative subject clitic *i-* in (5.26b) correspond to an internal argument. At this level of discussion, the two questions worth examining are, firstly, the exact positions occupied by the accusative and the nominative clitics in (5.26a) and (5.26b) respectively, and secondly, the factor that forces the object clitic in (5.26b) to surface as a nominative subject in the prefix position.

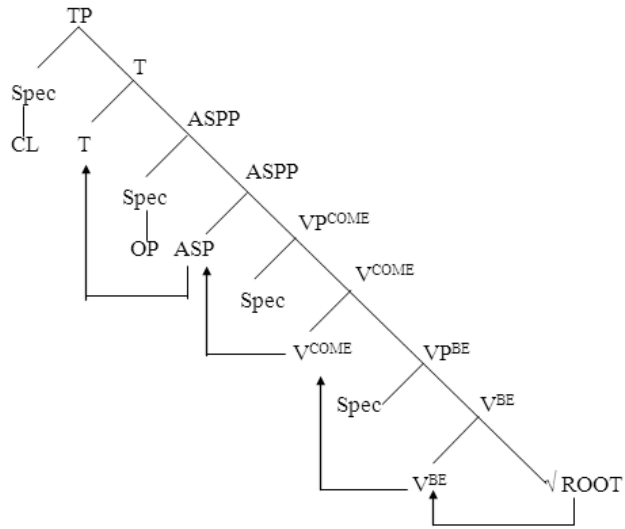
It has been widely agreed in the literature that arguments raise to the subject position most often for (nominative) Case and Extended Projection Principle motivations (see above). However, the accusative form (5.26a)

provides evidence that accusative case is available and movement exclusively motivated by Case requirements cannot be argued for. Therefore, the fact that the clitic surfaces with the nominative Case in (5.26b) is simply a consequence rather than a motivation for such a movement. The EPP on the other hand is now considered a property of the core functional categories C, T and light *v* (Chomsky 2000, 2001). The fact that the accusative clitic appears as a suffix in (5.26a) means that it occupies a lower position than the verb. By contrast, the nominative clitic occurring as a prefix in (5.26b) occupies a position that must be higher than the verb. As recalled in the introduction, I provisionally concluded in the previous chapter that the accusative clitic (5.26a) is in [Spec, Asp] as illustrated in (5.27a) below, while assuming the nominative clitic (5.26b) to be in [Spec, TP] as illustrated in (5.27b):

(5.27)



b.



In (5.27b) the clitic in [Spec, T] is in a head-spec relation with T, whence the nominative Case. By contrast, the clitic in (5.27b a) is in [Spec, ASP], which explains why it surfaces with the accusative case instead of the nominative. However, such a conclusion does not explain why the clitic in (5.26a) does not raise to [Spec, T] unlike the situation in (5.26b). In what follows, I argue that the reason why the clitic in (5.26a) does not raise to [Spec, T] is because the accusative form (5.26a) has a defective category T, as opposed to the nominative form (5.26b) which has a non-defective T.

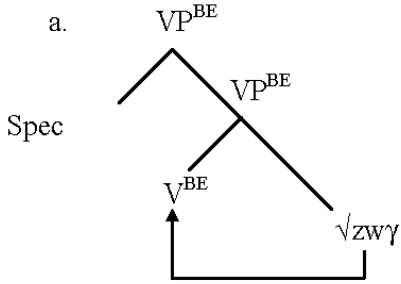
5.3.1 Accusative form and defective T

In the present subsection I argue that the category T involved in the accusative form (5.26a) is defective in the way proposed by Chomsky (2001) for some types of constructions including infinitives, raising verbs and Exceptional Case Marking (ECM) constructions. Chomsky (2001: 9) suggests that a defective T cannot have an EPP-feature; therefore no internal raising to [Spec, T_{def}] takes place. A functional category (probe) such as T has to be defective with respect to a given uninterpretable feature if the lexical category (goal) supposed to value and delete it lacks such a feature (Chomsky 2001: 6). In the case of the accusative form under consideration, such a hypothesis will explain why the object clitic does not move to spec of T as illustrated in (5.27a) above. The hypothesis just

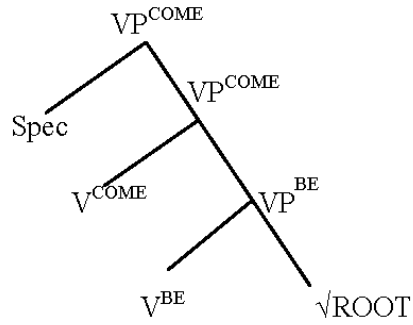
expressed raises the question why the category T associated with the accusative form is defective as opposed to the nominative form. I believe that the answer to such a question resides in the type of VP associated with T. Let me elaborate further on this proposal. In the previous chapter I showed that the accusative form of the verb of quality in (5.26a) has the argument-predicate structure illustrated in (5.28a), as compared to the one represented in (5.28b) for the nominative form (5.26b):

(5.28)

a.



b.

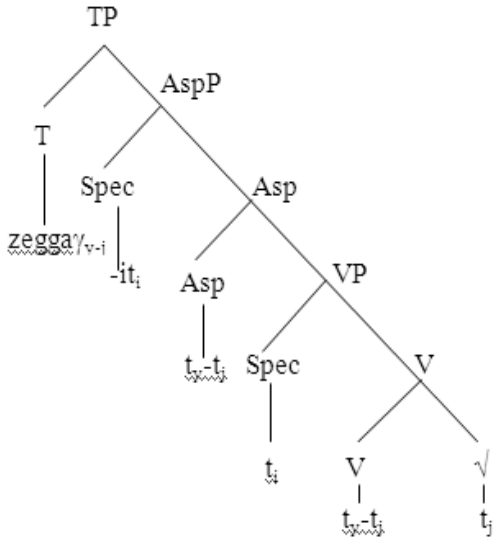


On the other hand, I proposed in Chapter 4 (Section 4) that the structures in (5.28a) and (5.28b) are selected by two different types of perfective Aspect. I called the aspect selecting VP^{BE} in (5.28a) stative, and the one selecting VP^{COME} in (5.28b) non-stative or inchoative. I take stative aspect to equal the one involved in the English passive construction exemplified in (5.29b), and the non-stative aspect to equal the one used with the active sentence in (5.29a):

(5.29) a. John broke the window
b. The window is broken

Participial forms lack complete φ-features, which means that they lack the ability to delete the φ-feature borne by the probe T (Chomsky 2001). In the English construction in (5.29b) the φ-features of T are valued by the auxiliary 'be', which inflects for complete φ-features. Without the auxiliary 'be', the T category in the passive sentence would have to be defective with respect to φ-features in order to avoid a mismatch with the features of the goal. This provides an account for the origin of defectiveness of the category T involved in the AZK accusative form exemplified in (5.22a). Like the English participle 'broken' in (5.29b) the verb stem *zegga*γ in (5.26a) does not contain φ-features. However, unlike the English passive construction where the auxiliary 'be' provides full agreement features; the Tamazight accusative construction (5.26a) does not contain an auxiliary verb that would supply such lacking φ-features. Moreover, the participial form cannot supply such features either because they have a default value (see § 2. 1 above). With this idea in mind, let us reconsider the structure illustrated in (5.27a), repeated below:

(5.30)



Chomsky (2000, 2001) suggests that non-defective C and T probes have complete φ-features. Features of the probe have to be valued and deleted by the goal because they are uninterpretable. To achieve such an objective, the stative V^{BE} and the probe T in (5.30) have to Agree with respect to φ-features prior to their Merge. However, as previously argued, the verb stem of the accusative form in (5.26) lacks φ-features. Therefore, the only remaining possibility for the derivation to proceed is by projecting a defective T_{def} instead of a complete T. Following the Chomsky's proposal repeated above according to which a defective T without an EPP-feature involves no internal raising to [Spec, T_{def}] (Chomsky 2001: 9), the clitic in (5.30) will remain in the spec of V^{BE} or ASP for the same reasons. In Minimal Inquiries (Chomsky 2000) and Derivation by Phase (Chomsky 2001) TP is not considered a strong phase, which means that the structure above has to merge with CP. On the other hand, Chomsky (op. cit.) argues that the category C is φ-complete and selects φ-complete T. Following such a proposal, the structure in (5.30) cannot merge with C because its T is not φ-complete. However, as far as the Tamazight language is concerned, there is evidence suggesting that the head Comp is neutral with respect to φ-features. When the Comp refers to the subject in relative clauses, the verb is realized in the participial form. As already mentioned in § 2.1, the participial form *y-V-n* is obtained by suffixing a participial morpheme *n* to the 3sg.m. Examples of relative clauses involving the neutral participial form are provided below. Comp *i*, which is invariable with respect to φ-features, has a subject as its antecedent:

(5.31) a. D kečč i y-ruh-n
Part you.m that went
It is you who left

b. D kem i y-ruh-n
Part you.fem that went
It is you who left

c. D netta i y-ruh-n
Part I that went
It is me who left

d. D nettat i y-ruh-n
Part I that went
It is me who left

e. D nekkwni i y-ruh-n
Part I that went
It is me who left

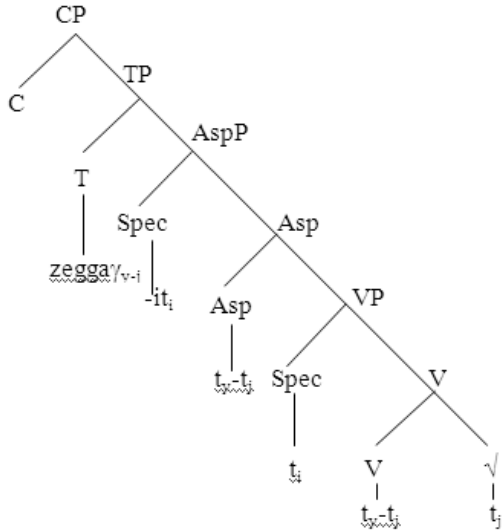
f. D kwenwi i y-ruh-n
Part I that went
It is me who left

g. D niteni i y-ruh-n
Part they.m. that went
It is them who left

h. D nitenti i y-ruh-n
Part they.f. that went
It is them who left

The examples above show that the Comp *i* is compatible with T_{def} because it is non-complete with respect to φ-features. Being non-complete means that the category C is devoid of EPP, which allows the clitic to remain in the spec of V or of ASP, which in turn would explain why it appears in the suffix position, supposing the verb to rise to C. Accordingly, I propose that the accusative form has the structure represented below:

(5.32)



The probe T_{def} in (5.32) is also defective with respect to nominative Case, which in fact is dependent on the agreement relation between the head and its specifier. Chomsky (2001: 6) adopts the following view "Structural Case is not a feature of the probes (T, *v*), but it is assigned a value under agreement then removed by Spell-Out from the narrow syntax". The hypothesis that the accusative form has a defective T as assumed above finds independent support in the Tamazight linguistic literature. Based on diachronic and synchronic data, Galand (1990) defends the idea that the accusative form is nominal rather than verbal. Combined with the idea that tense is the property that distinguishes verbs from nouns as suggested by Kornfilt (1985) for instance, Galand's proposal, if correct, would explain why the category T associated with the accusative form is defective. Galand (1980) argues that verbs of quality are nouns that are combined with accusative clitics[4]. He first compares Tamazight verbs of quality to nominal predicates in Akkadian (an extinct Semitic language), which occur with pronouns as illustrated below (from Galand 1980: 348):

4 A similar idea was suggested by Cohen (1988) with regard to Semitic languages. He proposed that verbs of state were derived through the suffixation of person markers to verbo-nominal stems.

(5.33) a. šarr-āku
King-me
I am a king

b. šarr-āta
King-you
You are a king

c. šarr
King
king (masculine)

d. šarr-at
King-f.sg
She is a King

In (5.33a-b), the noun *king* is combined with short forms of independent pronouns. The third person masculine in (5.33c) displays no morphological morpheme (or displays a zero morpheme), while the third feminine in (5.33d) shows up with the feminine gender marker *–at*. The non-inflected third masculine form *šarr* and the feminine form *šarr-at* are called state nominals (Caplice 1983: 22). Caplice (1988: 40) claims that in Akkadian, any noun or adjective may merge with an accusative suffix. Galand (1980) further points out that combination of nominals with pronouns has also survived in idiomatic and wh- expressions in contemporary Tamazight, citing the following examples from Taqbaylit (Kabyle Tamazight):

(5.34) a. D ir-it[5]
D bad-it
It is bad

b. ulac-it
None-it
It is not here/ there.

c. Anda-t?
Where-it
Where is it?

5 The expression in (140a) is constructed as follows: d (predicative copular) + ir (bad) + it (3m.sg accusative morpheme).

In this subsection I argued in favor of the idea that the accusative form has a defective T, which explains why the clitic occurs in the suffix position. In the next subsection I argue that unlike the accusative form, the nominative form is associated with a non-defective T.

5.3.2 The nominative clitic and the inchoative form

Compare again the accusative form in (141a) with the nominative form in (5.35b):

(5.35) a. Zeggaγ-it
Red.perf-.3m.sg.acc.
It is red

b. I-zwiγ
3m.sg.nom-red
It / he reddened

In the previous section I related the defective T of the accusative form (5.35a) to the stative verb V^{BE}, which I proposed lacks φ-features. Unlike the unaccusative form, the nominative form (5.35b) contains a non-stative V^{COME} in addition to the stative V^{BE}. The higher verb V^{COME} corresponds to the eventive verb referred to as light *v* in the recent literature (Chomsky 2000, 2001; Kratzer 1993, 2004; Embick 2004 among many others). Light *v* has often been viewed as containing more features than the lower stative V. Among the features admitted to characterize the eventive light *v* is the EPP feature (Chomsky 2000, 2001). In Kratzer's (1993, 2004) analysis, light *v* corresponds to Voice, which contains the EPP feature. Kratzer distinguishes between two types of Voice, only one of which is supposed to project an external argument. The projecting type is associated with transitive or active verbs, while the non-projecting type is associated with unaccusative, inchoative or passive verbs. In the latter situation, the internal argument has to rise to the Spec of Voice in order to check its EPP feature. As argued for in the previous chapter, the nominative clitic associated with the inchoative form of the verb of quality in (5.35b) corresponds to an internal argument, like the accusative clitic in (5.35a). That is, the higher V^{COME} involved in the inchoative form in (5.35b) would correspond to the type of Voice that does not project an external argument in Kratzer's analysis. Following Kratzer's view, I assume that in the inchoative structure the clitic raises from Spec of V^{BE} to Spec of V^{COME}.

Unlike the lower V, light *v* is considered a functional rather than a lexical category (Chomsky 2000, 2001). As such, it contains the same type of features as those postulated for T and C such as EPP and φ-features (Chomsky 2001). Given the correspondence between the abstract verb V^{COME} and light *v*, I assume that V^{COME} contains abstract φ-features which need to be lexicalized after Spell-Out. This feature is crucial as it distinguishes the inchoative verb V^{COME} from the stative verb V^{BE}. Accordingly, unlike the situation of stative verb V^{BE}, the verb V^{COME} will have to merge with a non-defective φ-complete T. Furthermore, agreement features of the verb V^{COME} will also have to agree with those of the clitic in its specifier in the way illustrated below:

(5.36)

Having adopted the late lexical insertion approach, all the elements represented in (5.36a) and (5.36b) are to be considered in the form of abstract features. In (5.36b) the φ-features of the clitic are inherent. By contrast, the Case feature is structural, because it is determined by its final landing site. Accordingly, if the clitic appears affixed to the verb possibly for phonological reasons, the verb will show up with two types of agreement: those belonging to the verb as illustrated in (5.36a), and those belonging to the clitic as illustrated in (5.36b). I demonstrate below that this is indeed what happens.

Unlike the accusative form dealt with in the previous subsection, which displays only the φ-features of the clitics, the nominative form may display two sets of φ-features: one of which belongs to the clitic, and the other to the higher verb V^{COME}. The set belonging to the clitic appears as a prefix, while the one belonging to V^{COME} appears as a suffix. As will be shown shortly, this idea will provide an account for the discontinuous affixes associated with the nominative form, as compared to the accusative form which occurs with suffixes only. This is illustrated by the comparative paradigms below:

(5.37)

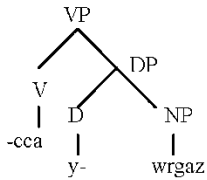
	Nominative subject	Accusative object
Singular		
1	------γ	-iyi
2m.	t-----t	-ik
2f.	t-----t	-ikem
3m.	y-----	-it / t
3f	t------	-itt / tt
Plural		
1	n-----	-aγ
2m.	t-----m	-ikun
2f	t-----mt	-ikunt
3m.	------n	-iten
3f.	------nt	-itent

Ouhalla (2005) discusses the possibility that the discontinuous affixes in the nominative paradigm in (5.37) may belong to two distinct categories. He views the suffix elements as agreement markers of the lower V. On the other hand, he proposes that the prefix elements are also agreement markers belonging to the category PredP, leaving open the possibility that such a PredP be identified as *v*P or simply as the projection of the agreement features, i.e. AgrP.

The analysis proposed here diverges from Ouhalla's with respect to both the prefix and the suffix elements. Unlike Ouhalla, I consider the prefix elements to be clitics, although they are realized on the verb because of their affixal nature. I have already recalled in Section 2 that the morpheme *y-* is base-generated as a head D prior to its incorporation onto the verb as illustrated below:

(5.38)

a.



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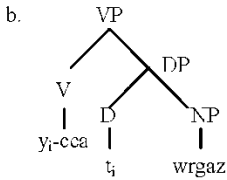
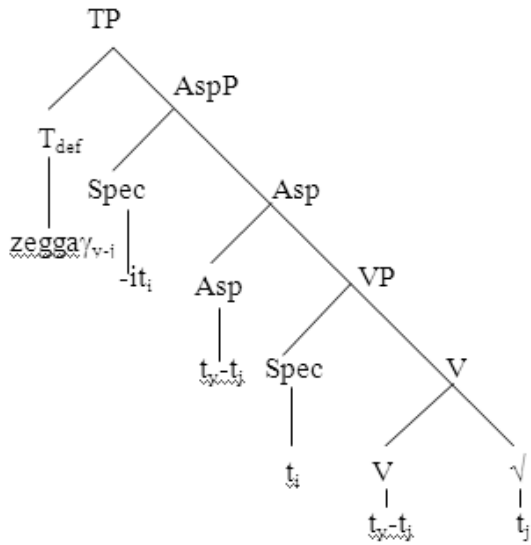


I also showed in section 3.1 that the object clitic associated with the accusative form is base-generated in [Spec, V^{BE}] as illustrated below:

(5.39)



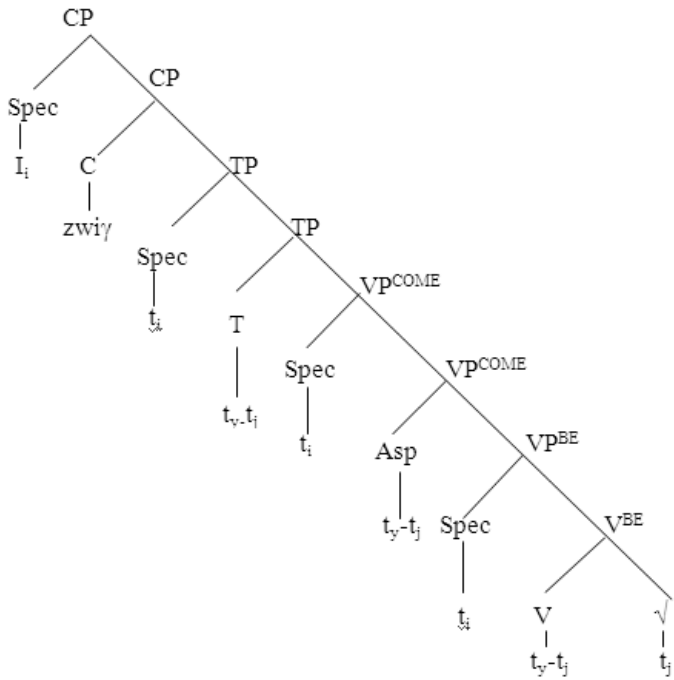
Given that the subject clitic *y-* occurring with the inchoative form also corresponds to the internal argument, it is reasonable to assume that it is also base-generated in [Spec, V^{BE}] as assumed earlier with respect to the (stative) accusative form. Semantically, this relation between the argument and the verb BE accounts for the resultative state interpretation associated with the inchoative form. As mentioned in Chapter 4, the resultative state interpretation differs from the simple state interpretation associated with the accusative form. In the latter situation, the interpretation is not preceded by an event. In the resultative situation, the state indicated is preceded by the event indicated by the verb COME.

The nominative clitic moves further to the spec of COME where it is interpreted as a Theme, hence the inchoative interpretation. Remember that the accusative form lacks the inchoative interpretation, which reinforces the idea developed in Chapter 4 and adopted here that the two forms are distinguished on the basis of the inchoative abstract verb COME. This view of thematic relations matches the one suggested by Jackendoff (1990: 47) according to which "[t]he terms Theme, Agent, and so on, are not primitives of semantic theory. Rather, they are relational notions defined structurally over conceptual structure, with a status

precisely comparable to that of the notions Subject and Object in many syntactic theories."

Unlike the stative verb BE which is selected by a defective T as discussed in the previous section, the inchoative verb COME is associated with a non-defective T. The reasons why I assume that the inchoative verb COME is selected by a non-defective T is because the verb COME has its own φ-features as argued for above and with respect to the structure illustrated in (5.39). Accordingly, both T and the category C have an EPP effect that triggers the movement of the clitic to the spec of T and subsequently to the spec of C. Therefore, unlike in the situation with the accusative form, the clitic ends up higher than the verb, which is presumably in C, and this accounts for both the nominative case and the prefix position of the nominative clitic. The structure that is derived thus is illustrated below:

(5.40)



So far I have only focused on the 3rd person singular, which shows as the suffix *y*- (masculine, but the same is true of the feminine morpheme *t*-). The nominative paradigm illustrated in the table (5.37) is not so homogeneous in the sense that it displays suffixes (1 sg and 3 pl); prefixes (3 sg and 1 pl) and discontinuous affixes (2 sg and pl). It has been acknowledged in the linguistic literature on Afroasiatic languages (see for instance Cohen 1988) that prefixes indicate person while suffixes indicate gender and / or number. Prasse (1973) and Cohen (1988) suggest that the suffix elements occurring with the simple stative form of verbs of quality are a remainder of a special type of conjugation system similar to the one called suffix conjugation in Semitic languages. As recalled previously, Ouhalla (2005) proposes that the prefixes and the suffixes illustrated in the nominative paradigm in (5.37) constitute two sets of agreement features belonging to two distinct categories, respectively V and PredP, which Merge to form a complex verb, leaving open the possibility that such a PredP be identified as *v*P or as AgrP.

Another idea proposed in the linguistic literature on Tamazight is that the person feature is associated with the prefix position. However, the first person singular suffix represents an exception in the sense that, despite its suffix position, it has been acknowledged to indicate person (Cohen 1963, 1988, Noyer 1992). Cohen (1988: 25) suggests that the 1sg. suffix -γ and the 2nd p. –d / -t are person markers inherited from the accusative form. Such a hypothesis is similar to the one adopted by Prasse (1973). This idea may be reconciled with the agreement marker status I proposed in (5.36a) above. The suffix elements may be seen as having evolved into inflectional agreement markers after they had lost their clitic status. The idea that inflectional elements may result from pronouns or clitics has been adopted by Ouhalla (2005) for the same type of clitics as those being under discussion. However, such a hypothesis raises another question as to why the person feature has not survived in the rest of the paradigm. It may be proposed that the person feature in Tamazight is not necessary to express the agreement relation between a verb and its subject and therefore has to be deleted in order to avoid redundancy with the prefix elements in the way suggested by Noyer (1992) which is based on autonomy of features. Noyer proposes that where discontinuous bleeding occurs, "a feature F will not appear if F has been realized by another affix at some other position of exponence in the form" (p. 142). In such a case, the person feature will not be realized as a suffix position because it has already been realized as a prefix. However, first person singular would constitute an exception in view of the well-known fact across languages that 1sg rarely bears a morphological feature indicating gender. Ouhalla

(2005) on the other hand suggests that prefixes in Tamazight have lost the number feature while retaining person and gender features, which is a general tendency in the Afroasiatic family of languages. Discussing the distribution of features along the discontinuous affixes in Tamazight, Noyer (*op. cit*) argues on the basis of data from the Tuareg dialect that 1sg is reanalyzed as singular.

5.4 Conclusion

In the present chapter I considered the status and the position of the suffix and the prefix morphemes associated with the accusative and the nominative forms. Based on the analyses provided by Guerssel (1995) and Achab (2003) I argued in favor the inflectional status of such morphemes (§ 2.1). I proposed that accusative clitics associated with the simple stative form of verbs of quality are in [Spec, ASP], hence its accusative case. By contrast, I argued that nominative clitics occurring with the inchoative form are in [Spec, C], whence the nominative Case. Following the idea of a defective T suggested by Chomsky (2000, 2001) I argued that the simple stative form has defective T. Defective T, according to Chomsky (2001: 9), cannot have an EPP-feature, which means that no internal raising to [Spec, T_{def}] takes place. By contrast, the category T involved in the nominative form is not defective, which explains why the clitic raises to the subject position, where it is realized as a prefix with nominative Case.

CHAPTER SIX

VERBS OF SPATIAL CONFIGURATION

6.1 Introduction

The present chapter is dedicated to the class of verbs of spatial configuration such as those listed below, with their equivalents in English and French:

(6.1)

Tamazight	French	English
qqim	*s'asseoir*	sit down
senned	*s'adosser, s'accoter*	lean against
bedd	*se mettre debout*	stand
kker	*se lever*	stand up
tinez	*se baisser*	bend
knu	*s'incliner, se courber*	bow
qummec	*s'accroupir*	squat

The Tamazight verbs listed above, like their English counterparts, lack reflexive morphology, and thus contrast with their French equivalents, which display the reflexive pronoun SE. Their lack of reflexive morphology notwithstanding, I argue in the present chapter that these verbs are indeed reflexives in both Tamazight and English. The stand I am taking here is that reflexivity is not only a matter of morphology but it is also one of syntax and semantics. The idea of semantic reflexivity in the absence of morphological marking is familiar from the literature as it has already been proposed for semantically reflexive verbs such as 'wash' in English, as in [John washed], and their equivalents in other languages (for instance Reinhart 1996, 2002; Reinhart and Reuland 1993; Reinhart and Silony 2004; McGinniss 1999). However, to the best of my knowledge, such an analysis has never been extended to include the class of spatial configuration verbs such as those listed in (6.1) above.

The present chapter is organized as follows. In Section 2 I argue that verbs of spatial configuration have a triadic structure unlike unaccusative and inchoative verbs, which have a dyadic structure. In Section 3, I argue in favor of a reflexive analysis of verbs of spatial configuration in Tamazight. A unified approach will be proposed for verbs of spatial configuration in languages including Tamazight and English where such verbs do not have reflexive morphology, and in languages where such verbs display reflexive morphology as in French. Section 4 concludes the present chapter.

6.2 Internal structure and predicate-argument structure

In the present section I argue that verbs of spatial configuration have a triadic structure, which contrasts them with unaccusative and inchoative verbs, which have a dyadic structure as seen in the previous chapters. As will be seen, such a triadic analysis will account straightforwardly for the three different interpretations associated with this class of verbs, in a manner that fits remarkably within the approach adopted in the present dissertation as outlined in Chapter3.

Unlike the class of inchoatives and unaccusatives, verbs of spatial configuration may yield up to three different interpretations depending on the context. These three interpretations correspond to those called ‘simple state position’, ‘maintain position’, and ‘assume position’ by Levin and Rappaport (1995). In L & R’s analysis the ‘simple position’ meaning refers to the configuration of the argument in space as in the sentence exemplified (6.2a) below; ‘the maintain position’ describes “the maintenance of a particular spatial configuration by animate being” (p. 127) as in the sentence exemplified in (6.2b), while the ‘assume position’ “describes an animate being coming to be in a particular position under his or her own control” (idem) as in (6.2c):

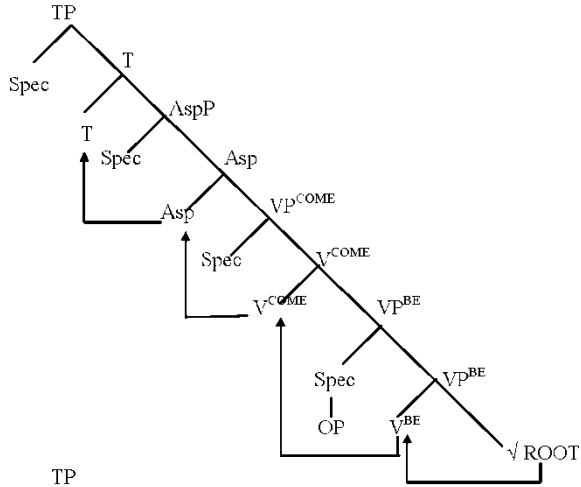
(6.2) a. The statue stood in the corner
b. Yvonne stood alone in the hallway (for six hours)
b. Yvonne stood (up)

Following the terminology adopted in the present dissertation, I will refer to these interpretations simply as ‘resultative state’, ‘inchoative’ and ‘agentive’. The agentive interpretation refers to the action undertaken by or under the control of the argument in order to be in the specific position indicated by the verb. The inchoative interpretation refers to the motion undertaken by the (body of the) person who performs the action in order to

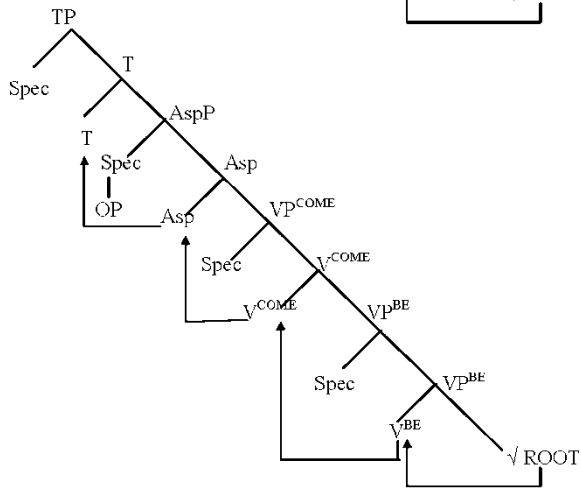
be in a specific configuration. The resultative state interpretation corresponds to the configuration resulting from the motion involved in the inchoative interpretation.

(6.3)

a.



b.



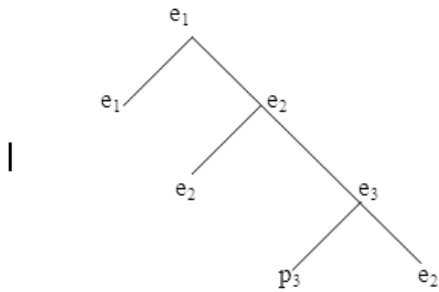
The stative and the inchoative interpretations are captured in the same way as proposed for the inchoative class of verbs of quality and the class of unaccusative verbs dealt with in Chapter 4. To recapitulate, I postulated a scope operator in the syntax with two different scope positions. When the

scope of the operator is restricted to the domain of the lower VP[BE] as illustrated in (6.3a), the interpretation is resultative, and if the operator has scope over the higher VP[COME] as illustrated in (6.3b), the interpretation is inchoative.

More needs to be said however in regards to the agentive interpretation, which involves *animacy* and *will*, two properties of Agents. That is, the same argument associated with the event indicated by the verb not only undergoes a change of configuration as a Theme, but also acts as the Agent that performs the action at the same time. Following the notation proposed in the literature (Jackendoff 1990, Pinker 1989 and Talmy 2000 among others) I paraphrase the verb function involved in the agentive interpretation as ACT, and its syntactic representation as $V^{ACT\ 1}$. Thus the dyadic structures illustrated in (6.3a) and (6.3b) above turn out to be inappropriate for verbs of spatial configuration in that they do not take into account the agentive interpretation. To solve this problem, the the event structure and lexical structure proposed for inchoative verbs has to be augmented with an agentive layer, the head of which is to be paraphrased with the abstract verb ACT, in the way illustrated in (6.4a) and (6.4b) respectively:

(6.4)

a.

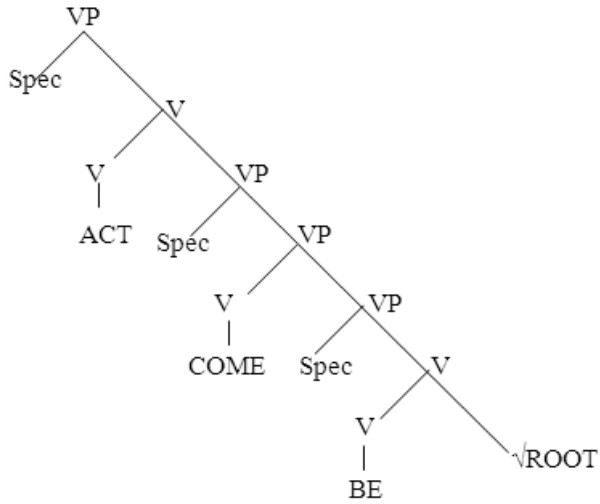


b. [ACT [COME [BE ([√ROOT])]]]

1. Embick (2004a) assumed the agentive *v*, which he indicated as *v*[AG], to be different from the inchoative *v*, which he wrote as *v*[FIENT]. I take Embick's *v*[AG] and *v*[FIENT] to correspond to *v*-[GO] and *v*-[ACT] adopted in the present chapter. [FIENT], short for the word 'fientive' is used by the author as a synonym of the word 'inchoative'.

Following the approach outlined in Chapter 3, the mapping of the event structure in (6.4a) and the lexical structure in (6.4b) yields the predicate-argument structure represented in (6.5) below, ignoring for the moment the functional categories as well as the position of the argument with that of the operator, which will be discussed in the next subsection:

(6.5)

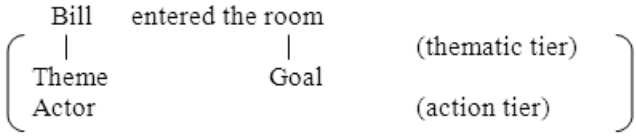


In view of the fact that the stative and the inchoative interpretations are obtained in the same way as proposed for unaccusative and inchoative classes (i.e. by restricting the scope of the operator to the verb BE or by enlarging it to include the verb COME), it is reasonable to suppose here that the triadic structure proposed in (6.5) is derived by augmenting the dyadic structure proposed for inchoatives and unaccusatives. Accordingly, for the argument associated with verbs of spatial configuration to be interpreted, it has to stand in a Spec-head relation with the verb BE under the resultative state interpretation, and with the verb COME under the inchoative interpretation. This is enough evidence that in the triadic structure represented in (6.5), the argument is internal. To obtain the agentive interpretation, the argument has to move to the specifier of the verb ACT. The idea that internal arguments may be interpreted as agents is not new. Labelle (1992) for instance argued in favor of such an idea on the basis of French reflexives. Levin and Rappaport (1995) on the other hand

argue that under the 'maintain position meaning', which the authors define as "the maintenance of a particular spatial configuration by animate being", the argument is internal and agentive.

At first sight, the dual thematic interpretation of an argument might look problematic since the argument associated with such verbs is interpreted as a Theme under the inchoative interpretation and as an Agent under the agentive interpretation. However, the problem disappears if we accept the idea that the argument is interpreted not as *either* a Theme *or* as an Agent, but *both* as a Theme *and* an Agent simultaneously. This in fact is the main semantic characteristic that singles out verbs of spatial configuration from the class of transitive verbs. Such an idea was for instance defended by Jackendoff (1990) after Talmy (1985), Culicover and Wilkins (1986). Discussing non-morphological reflexive verbs of spatial motion, Jackendoff proposes a *two-tier representation* of thematic roles allowing for two θ-roles to be mapped onto one same argument in the manner illustrated below (from Jackendoff 1990: 126):

(6.6)



Obviously, the view that one argument may have more than one thematic interpretation goes against the bi-uniqueness property stated in the θ-criterion as formulated in *Government and Binding* (Chomsky 1981). Such a view, which was implicit in the analysis proposed by Chierchia (1989) in the context of Italian using property theory (see § 4), was later endorsed by Alsina (1996) and modified by Reinhart (1996) with respect to reflexives. As a matter of fact, verbs of spatial configuration share the property of dual thematic interpretation with reflexive verbs whose main semantic characteristic resides in the coreferential interpretation of two distinct thematic roles associated with the same predicate (Reinhart and Siloni 2005). This similarity is further investigated in the next section where I propose a reflexive analysis for the class of spatial configuration verbs in Tamazight.

6.3 Reflexive analysis of verbs of spatial configuration

In the present section I argue in favour of a reflexive analysis of verbs of spatial configuration in Tamazight. Before presenting the analysis, I first review some of the approaches proposed for morphologically reflexive verbs in various languages in the literature. Such areview is necessary as some of the ideas suggested are appealed to in the course of the discussion.

6.3.1 Reflexive analyses: overview

In the present section I go through some of the analyses proposed for reflexive verbs in the literature. Such a review will be useful when I present my analysis in Section 3.2. The existing analyses are of two types, transitive-based and intransitive-based.

6.3.1.1 Transitive proposals

Many linguists among those proposing a transitive approach for reflexive verbs (see the references cited above) view the reflexive element as an argument having its own thematic role, although they diverge as to which of the lexical argument or the reflexive element should be considered as internal or as external. Some linguists propose to view the lexical DP as external, and the clitic SE as internal (Rizzi 1986, Burzio 1981, 1986; Dobrovie-Sorin 1998; Fontana and Moore 1992; and D'Alessandro 2001 among many others). Others adopt the opposite view, considering the lexical argument as internal and the reflexive element as external (Kayne 1988, 1990, 1991; Pesetsky 1995 and Sportiche 1998 among many others). In both situations, coreference between the two arguments is supposed to be established via binding as opposed to chains that are established by movement.

A number of proposals have been made in the literature regarding the intransitivization of reflexive verbs. For instance, Keenan (1987) proposes that the English reflexive pronoun *himself* in a sentence such as *John washed himself* is an operator that turns a transitive predicate into an intransitive. Other linguists view reflexivization as an operation, often referred to as *Reduction*, which derives a reflexive structure from a transitive structure (for instance Grimshaw 1982, 1990; Marantz 1984; Bouchard 1984; Wehrli 1986; Chierchia 1989, 2004; Rosen 1989; Reinhart and Siloni 1999). They suggest that the reflexive element is viewed as a valence-reducing morpheme with only a semantic but not a syntactic role; although they diverge as to which one of the internal or the

external argument is affected by such an operation. While some argue that the *Reduction* operation suppresses the internal argument (for instance Grimshaw 1982; Wehrli 1986; Chierchia 1989, 2004; Reinhart and Siloni 1999), others argue that this operation affects the external argument (Marantz 1984; Bouchard 1984; Rosen 1989; Grimshaw 1990).

Those advocating reduction of the internal argument propose that reflexivization results from the linking of the internal theta role with the external theta role. Such an operation is meant to block the mapping of the internal theta role onto the object position in the syntax. Wehrli (1986) phrases the proposal in terms of absorption of the internal theta-role by the reflexive clitic SE. The hypothesis bears similarity with the later one proposed for passives by Baker, Johnson and Roberts (1989). Chierchia (1989, 2004) on the other hand proposes that the operation reduces a transitive V to an intransitive one by suppressing the internal argument, while keeping its meaning associated with the verb, formulated as V(*x*, *x*). On the other hand, advocating the suppression of the external argument, Marantz argues on the basis of small clauses that a lexical operation raises the internal argument to the subject position as illustrated below:

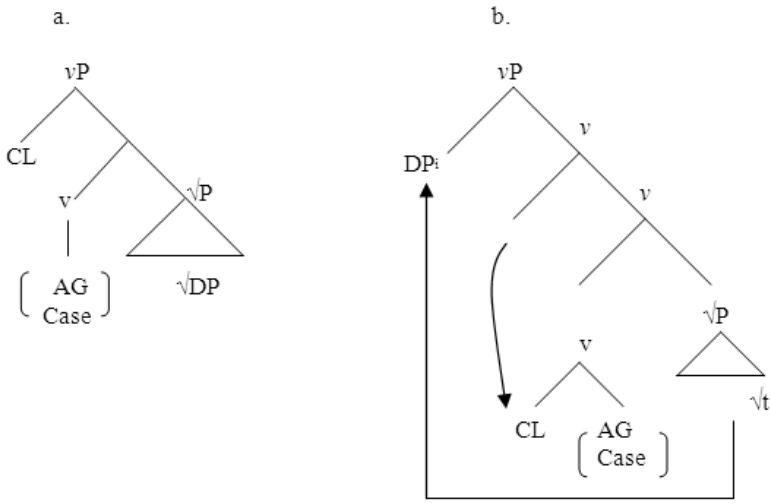
(6.7) Jean_i se considère t_i intelligent

Reinhart and Siloni (2005) argue that languages might differ as to the level where such an operation takes place. In some languages such as English, Hebrew and Hungarian, the operation takes place in the lexicon. In other languages such as the Romance languages for instance, the operation takes place in the syntax. The idea is akin to the decausativization or suppression operation proposed for unaccusative verbs by Chierchia (1989, 2004), Levin and Rappaport (1995), and Reinhart (1996, 2002). The difference between the *Reduction* operation proposed for reflexives and the decausativization operation proposed for unaccusatives is that the former does not suppress the theta role, which remains active in the syntax. The effect of the Reduction operation is to prevent the mapping of the external variable (or its theta role) onto the external argument position in the syntax.

Alboiu *et al* (2004) view reflexives in Romance as transitive constructions with only one (DP) argument, merged as internal but spelled out as external subsequent to its movement to Spec of *v*P. They propose that the reflexive morpheme SE results from the spelling out of the copy left by the DP argument subsequent to its movement to the subject position. The idea is articulated within the spirit of Distributed Morphology (Halle and Marantz 1993). Such a copy is spelled out in an

underspecified form because of a constraint on A-chains which requires that only the original copy be fully specified as + R(referential) along the lines suggested by Reinhart and Reuland (1993). Clitic *Se* in Romance is thus considered as an incomplete nominal whose only relevant morphosyntactic feature is the person (π) feature. Also operating within the Distributed Morphology approach, McGinnis (1999) and Embick (2004) argue that reflexivization entails cliticization of an anaphoric external argument onto the verb, thus freeing the external argument position. The internal argument, which corresponds to the lexical DP, then moves to the external argument position. The derivation is illustrated in (6.7a) and (6.7b) (Embick's (2004: 141, (4) and (5) respectively):

(6.8)



6.3.1.2 Intransitive proposals

Intransitive (or unaccusative) analyses restrict the argument status in the syntax to the lexical DP, i.e. excluding the reflexive element. For instance, Sportiche (1998) proposes that the argument appearing as the subject corresponds to an internal argument that raises to the subject position to bind the reflexive SE which bears the external theta-role as illustrated below:

(6.9) $Jean_i$ se lave t_i

Hornstein (1999, 2001) proposes a version of the intransitive approach viewing reflexive constructions as having only one argument, which is internal, but which is associated with two distinct thematic roles, the Agent and the Patient. These theta roles are first mapped onto syntactic positions, independently of the lexical argument. The internal argument is then projected into the object position where it picks up the Patient role. Subsequently, the internal argument rises to the specifier of the higher *v* where it is associated with the Agent theta role, leaving a copy in its original site. Hornstein further argues that both the internal argument in the subject position and the copy left in the object position have to be pronounced for Case requirements. As a result, the copy is pronounced as SE.

6.3.2 Analysis

Let me start the discussion by comparing the French verb of spatial configuration *s'asseoir* 'sit' in (6.10a), which displays the reflexive pronoun SE, with its Tamazight counterpart *qqim* in (6.10b) which does not display any reflexive morphology.

(6.10) a. Il s'est assis
He SE is sit down
He sat down

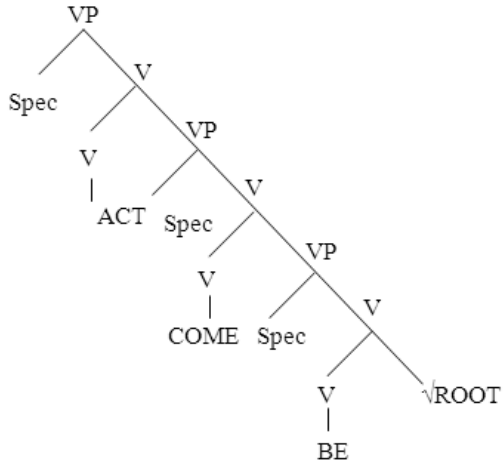
b. I-qqim
3Sg.M.-sat down
He sat down

In what follows, I first argue that the French reflexive exemplified in (6.10a) and the Tamazight reflexive in (6.10b) have the same lexical structure and the same predicate-argument structure represented in (6.11a) and (6.11b) below respectively (see section 2):

(6.11)

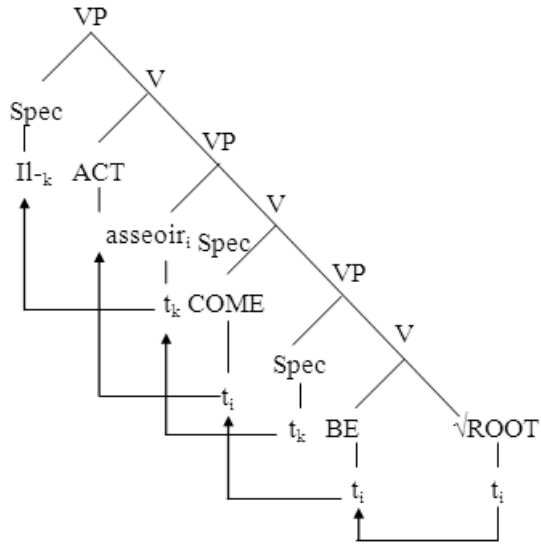
a. $[_{Event}$ ACT $[_{Event}$ COME $[_{State}$ BE ([√ROOT])]]]

b.



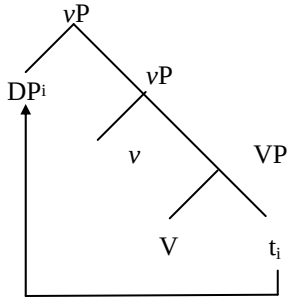
I already argued in Section 2 in favour of the internal status of the argument associated with verbs of spatial configuration, being first generated in Spec of BE before it raises to [Spec, COME] where it is interpreted as a Theme and subsequently to [Spec, ACT], where it is interpreted as an Agent. I adopt the idea from Distributed Morphology (Halle and Marantz 1993) in which the phonological features corresponding to the lexical items in the syntactic structure are inserted after Spell-Out. Subsequent to its movement to [Spec, ACT] the internal argument leaves an identical copy in both [spec, BE] and [spec, COME]. Let me illustrate this below with the French reflexive sentence given in (6.10a), keeping in mind that the lexical elements on the tree are abstract features indicated only for the sake of clarity:

(6.12)



The structure above contains no phonological features corresponding to the reflexive element S unlike the internal argument *il*. The movement of the internal argument to [spec, ACT] leaves a copy in [spec, COME] and in [spec, BE]. The copy in [spec, COME] keeps its original thematic interpretation (or thematic role) as a Theme subsequent to the movement of the original copy to [Spec, ACT] where it is interpreted as an Agent. As noted in § 4**,** Hornstein (1999, 2001) argues in favor of an intransitive analysis of reflexive constructions in which their internal argument is associated with two distinct thematic roles, namely the Agent and the Patient. He suggests that such thematic roles are mapped onto syntactic positions independently of the lexical argument. In his analysis, the internal argument is projected into the object position where it picks up the Patient role before it raises to the spec of the higher *v* where it is associated with the Agent theta role, leaving a copy in its original site as illustrated below:

(6.13)



In the structure I proposed in (6.12) the copy in [spec, COME] is to be understood as distinct from a DP trace. DP traces do not have a thematic interpretation, and even if they do, it is no different from the one borne by the original DP. In order to highlight this distinction, I indicate copies that have a distinct thematic interpretation from the original copy as $t_i\theta$, where t_i refers to the copy of the argument and the symbol θ its thematic interpretation. Accordingly, the movement of the internal argument from [spec, COME] to [spec, ACT] in (6.12) results in a chain with two thematic roles and one argument, which can be represented as follows:

(6.14) $[Arg_i\theta_k \text{ ACT}[t_i\theta_j \text{ COME } [t_i \text{ BE}]]]$

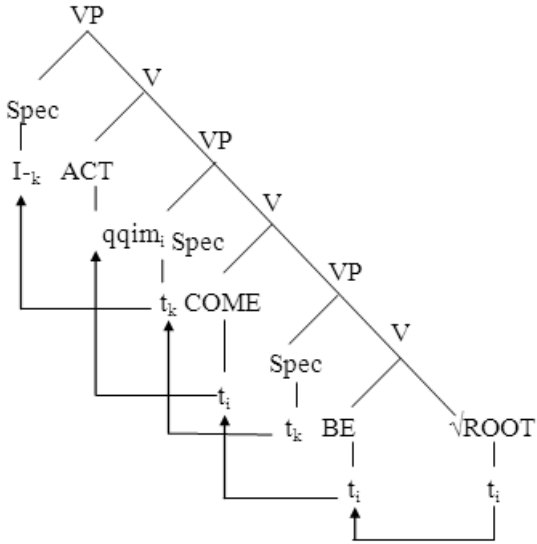
At this level, the idea that phonological features are inserted only after Spell-Out allows us to extend the proposal outlined for the French reflexive verb *s'asseoir* to the Tamazight counterpart verb *i-qqim*, which as a reminder lacks reflexive morphology. Let us compare again the French verb *s'asseoir* reproduced in (6.15a), with its Tamazight equivalent *iqqim* reproduced in (6.15b):

(6.15) a. Il s'est assis
He SE is sat down
He sat down

b. I-qqim
3m.sg.-sat down
He sat down

In the Tamazight example (6.15b) the internal argument corresponds to the subject clitic *i-* suffixed to the verb. I demonstrated in Chapter 5 on the basis of construct state nouns that the subject morpheme *i-* originates as the head D of the lexical DP, which subsequently cliticizes onto the verb. Accordingly, applying the structure proposed in (6.12) for the French verb *s'asseoir* to the Tamazight equivalent verb *i-qqim* in (6.15b), we get the following syntactic structure, again keeping in mind that the lexical elements on the tree are abstract features indicated only for the sake of clarity:

(6.16)



Like the structure proposed in (158) for the French reflexive, the structure in (6.16) contains trace copies in [Spec, COME] and [Spec, BE] left by the internal argument *i-* subsequent to its movement to [Spec, ACT]. So far, the simultaneous interpretation of the lexical argument as an Agent and as a Theme is captured in the same way as in the equivalent French verb discussed above. The raising of the internal argument yields an A-chain that is similar to the one proposed for the French reflexive verb *s'asseoir* in (6.17) as shown below:

(6.17) $[CL_i\theta_k\ ACT[t_i\theta_j\ COME\ [t_i\ BE]]]$

In (6.17) the original copy represents the clitic subject. The trace copies contain features that are identical to those borne by the clitic, except for those determined by their respective positions such as thematic interpretations and Case. Let me now show how the French morphological reflexive and its Tamazight non-morphological reflexive counterpart are spelled out differently at the post-spell out level, thus accounting for their morphological differences. Getting inspiration from Hornstein (1999, 2001), Alboiu et al (2004) suggest that the reflexive morpheme SE in Romance is specified for person feature only. Accordingly, they propose that its selection to spell out the lower copy results from a constraint on A-chains, which requires that only the original copy be fully specified as + R(eferential). Such a constraint is formulated by Reinhart and Reuland (1993) as follows:

(6.18) *General Conditionon A-chains*
A maximal A-chain ($\alpha_1 \ldots \alpha_n$) contains exactly one link α_1 that is both + R and Case marked.

Adopting the chain condition above, combined with the view formulated by Alboiu et al. suggests that all the abstract features making the lower copy +R(eferential) be deleted prior to spell-out. Applied to the French and the Tamazight examples in (6.15), with their structures illustrated in (6.12) and (6.16) respectively, the abstract features have to be impoverished in order to make them –R. After Spell Out, they will be substituted for with their corresponding lexical items from the lexicon. Because French has an anaphoric underspecified default pronoun which contains only the features that survive the morphological impoverishment, this pronoun will be inserted at the level of vocabulary insertion. Unlike French, Tamazight lacks such an underspecified pronoun[2]. Accordingly, the abstract features of the copy that have survived the impoverishment process are condemned to remain silent after Spell-Out. To conclude, although the French verb *s'asseoir* and its Tamazight equivalent *qqim* have similar structures prior to Spell-Out illustrated in (6.12) and (6.16) respectively above, they diverge morphologically after Spell-Out for the reasons just mentioned.

2. Tamazight has reflexive pronouns that are specified with respect to φ features. They parallel they English reflexives of the type pronoun + self.

Both the French and the Tamazight copies, equally indicated as $t_i\theta_j$ in [Spec, COME], confers the Theme interpretation to their internal argument, which is the role of reflexive pronouns. Thus considered, the copy $t_i\theta_j$ in [Spec, COME] in the Tamazight structure (6.16) is a null reflexive element, i.e. not spelled out phonologically. In the remainder of this section, I provide more evidence from various languages in favor of null reflexive pronouns.

6.3.3 More evidence in favour of null reflexives

Evidence across languages shows that reflexive interpretation does not necessarily require overt reflexive pronouns or clitics. In Modern Greek for instance, some types of verbs yield a reflexive interpretation when used with non-active voice although they display no reflexive element. This is the case of the verbs referring to body action such as *wash*, *comb*, etc., exemplified below (from Embick 2004: 145, (11)):

(6.19) I Maria xtenizete kathe mera
the.NOM Maria.NOM comb.Nact.3SG every day
'Maria combs herself every day.'

Embick (2004b: 146) argues that the reflexive interpretation involved in (6.19) is not due to a non-active voice morphology since non-reflexive constructions such as passives and unaccusatives also occur with non-active voice. Embick suggests that body-action verbs such as the one exemplified in (6.19) contain a self-related component as part of its inherent meaning. McGinnis (1997) on the other hand discusses facts from Hebrew showing that verbs referring to body action, such as *hitraxec* 'wash' exemplified in (6.20) below, contain syntactically active inherent (empty) reflexive clitics:

(6.20) Ani xoshev she mishehu hitraxec (McGinnis 1997: 149, (25a))
I think that someone washed

McGinnis proposes that the verb *hitraxec* (6.20) involves a phonologically null reflexive clitic because the verb, which patterns with the *hitpael* form, is associated with a Caseless *v*. While Embick suggests that body-action type verbs such as the one illustrated in (6.19) lack the external argument, McGinnis (1997) on the contrary argues that they involve a morphologically null external argument in the spec of *v*P distinct from the internal argument. The relevancy of Embick's (2004) and McGinnis'

(1997) proposals to our analysis proposed in the present chapter resides in the fact that reflexive verbs do contain null reflexive elements, whether as an argument (McGinnis' proposal), or as part of the verb meaning (Embick's proposal). Note that McGinnis' proposal is more compatible with our reflexive analysis presented in the previous section since it postulates the existence of null or empty reflexive pronouns.

6.4 Conclusion

In the present chapter I defended the idea that Tamazight verbs of spatial configuration participate in true reflexive constructions in spite oftheir lack of reflexive morphology as illustrated below:

(6.21) Y-qqim
3Sg.M.-sat down
He sat down

The structure of the Tamazight verb exemplified in (6.21) was compared with the one proposed for its verb equivalent in French, which is morphologically reflexive as shown in (6.22):

(6.22) Il s'est assis
He SE is sit down
He sat down

I first argued that the single argument that appears as the subject in both the Tamazight example in (6.21) and the French example in (6.22) is internal. I further argued on the basis of conceptual semantics that in both situations the argument involved is internal with two thematic interpretations, namely Agent and Theme. I proposed that such a mapping obtains in the narrow syntax by raising the lexical argument from [Spec, COME] to [Spec, ACT], thus forming an A-chain, composed of the lexical argument and a thematic copy. Following Alboiu *et al* (2004) I adopted the A-chain constraint formulated by Reinhart and Reuland (1993), requiring that the lower copy of an A- chain be underspecified. I argued that fully specified copies undergo morphological deletion of certain features after Spell-Out. Accordingly, I proposed that the derivation of the Tamzight and the French sentences, given respectively in (6.21) and (6.22), diverge at Spell-Out. Since French language has an underspecified or default reflexive pronoun SE, the lower copy will therefore surface as a morphological reflexive pronoun. By contrast, the Tamazight language

lacks an underspecified pronoun, and therefore the lower copy remains morphologically empty.

CHAPTER SEVEN

CAUSATIVE VERBS OF CHANGE

7.1 Introduction

In the present chapter I investigate the internal structure of causative verbs of change and the derivation of their predicate-argument structure in the syntax within the same approach as the one adopted in the previous chapters. Like many languages, Tamazight has two types of causatives which correspond to those termed as lexical and morphological in the linguistic literature. Morphological causatives refer to transitive verbs that are derived from intransitives with the means of the causative morpheme SS-[1] as exemplified with the verb *ss-aawj* 'bend' in (7.1b) below, to be compared with its intransitive counterpart in (7.1a):

(7.1) a. Taawej tsarut
3f.s.bend-perf cs.key
The key is bent

b. I-ss-aawej Aksel tasarut
3m.s.CAUS-bend-perf Aksel fs.key
Aksel distorted the key

Lexical causatives on the other hand are morphologically basic in that they do not involve any causative morpheme, as exemplified with the verb *ldi* 'open' in (7.2b) below, with its intransitive counterpart given as (7.2a):

(7.2) a. Teldi tewwurt
3F.Sg.open-PERF cs.door
The door opened / is open

.1 The causative morpheme SS has also a non-geminate variant, which seems to be morpho-phonologically conditioned. In the present discussion however, I refer to it indifferently as SS-morpheme. For a morpho-phonological analysis of this morpheme see Guerssel (1992b) and Lahrouchi (2003).

b. Teldi Numide tawwurt
3M.Sg.open-PERF Numide fs.door
Numide opened the door

I argue that the event structure and the predicate-argument structure of both types of causatives look alike; but they differ with respect to the way their lexical structure is represented or construed at the lexical level and the way their abstract verb CAUSE is lexicalised in the syntax. Ultimately, I argue that morphological causatives such as the one exemplified in (7.1) and lexical causatives such as the one exemplified in (7.2) share the structure represented in (7.3), while demonstrating that the differences reside in the strategies applied to lexicalise the abstract verb CAUSE:

(7.3) $[_{\text{Event}}$ CAUSE $[_{\text{Event}}$ BECOME ([√ROOT])]]

The rest of the discussion provided in the present chapter runs as follows. In Section 2, I deal with the class of morphological causatives where I argue that such verbs have their abstract verb CAUSE lexicalised by the causative morpheme SS-. In Section 3, I deal with the class of lexical causatives alternating with the intransitive use such as the one exemplified in (7.2) above. I argue that the abstract verb CAUSE involved in their structure is lexicalised by means of the lexical √ROOT. The two different lexicalisation strategies applied with morphological causatives and lexical causatives are further elaborated upon in Section 4. Section 5 is dedicated to lexical causatives that do not have an intransitive alternate in Tamazight such as the verb *nγ* 'kill'. I argue that this class of verbs involve a different structure from the one postulated for the class of intransitive alternating verbs. The two types of structures to be proposed for alternating and non-alternating verbs will allow us to account for an intriguing phenomenon observed across languages, namely why some lexical verbs alternate with the intransitive use in some languages but not in others. This question will be investigated in Section 6 where I contrast the structure proposed for the verbs *bnu*, 'build', *gzem* 'cut' and *krez* 'plough' which alternate in Tamazight, with the one proposed for their English equivalents which do not alternate. Section 7 concludes the present chapter.

7.2 Morphological Causatives

All the three types of intransitive verbs of (change of state) dealt with in the previous chapters may serve as input for the derivation of their transitive counterparts by prefixing the causative morpheme SS.

Causatives derived from verbs of quality are illustrated in (7.4b); those derived from unaccusative verbs are exemplified in (7.5b), while those derived from verbs of spatial configuration are exemplified in (7.6c) below:

(7.4) a. Semmed-et lqahwa (intransitive)
Cold-3F.SG.ACC coffee
The coffee is cool

b. Y-ss-ismd Aksel lqahwa (causative)
3M.Sg.NOM-CAUS.cool.PERF Aksel coffee
Aksel cooled the coffee

(7.5) a. Y-rγa wexxam-is (intransitive)
3M.Sg.burn. cs,house-his
His house has burned down

b. Ss-rγ-n laaskar axxam-is (causative)
CAUS-burn-3m.pl. soldiers fs.house-his
The soldiers have burnt his house down

(7.6) a. I-qqim mmi-s γef ukersi(intransitive)
3Sg.M.-sit.perf child-her on chair
He sat / is sitting on the chair

b. T-ss-γim mmi-s γef ukersi (causative)
3fs-CAUS-sit child-her on chair
She stood her brother on the table

In Chapter 4 I showed that unaccusative verbs have the same structure as inchoatives; therefore, these two types are treated as one in the present chapter. I first deal with causatives derived from verbs of quality and unaccusatives (§ 2.1) before I move to those derived from verbs of spatial configuration (§ 2.1).

7.2.1 Causatives derived from verbs of quality and unaccusatives

More examples of morphological causatives derived from intransitive verbs of quality are listed below:

(7.7)

Root	**Stative**	**Inchoative**	**Causative**
√zwγ (be red)	zeggaγ	izwiγ	ss-izweγ
√mγr (be grown up)	meqqar	imγur	ss-emγr
√γzf (be tall; long)	γezzif	iγzif	ss-γezef
√wzl (be small)	wezzil	iwzil	ss-ewzl
√brk (be black)	berrik	ibrik	ss-ibrik

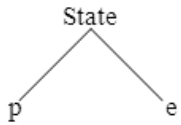
The forms above show clearly that the verb stem of the causative form has the same morphology as the one involved in the inchoative forms, but is different from the one in the pure stative. Given this observation, it is reasonable to conclude that the LS of the causative forms is derived from their inchoative counterpart, rather than from the stative one, by adding the causative component to its LS. To recapitulate, I argued in Chapter 5 that the pure stative forms occur with accusative object clitics in the perfective as illustrated with the verb form *zeggaγ* 'be red' in (7.8a); while the inchoative forms occur with subject clitics prefixed to the verb as illustrated with the form *zwiγ* 'become red' in (7.8b):

(7.8) a. Zeggaγ-it
Red (PERF) -CL. 3M.Sg.
It is red

b. I-zwiγ
CL.3M.Sg.NOM.-red
It / he reddened

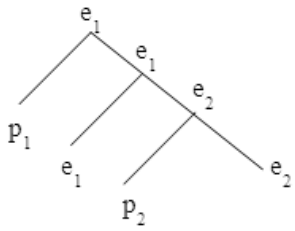
I argued that the stative form in (7.8a) has the monadic ES and LS illustrated in (7.9a) and (7.9b), respectively; while the inchoative form in (7.8b) has the dyadic ES and LS illustrated respectively in (7.10a) and (7.10b):

(7.9) a. ES



b. LS: [BE *x* [√ROOT]]

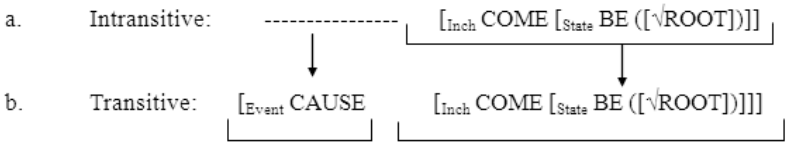
(7.10) a. ES:



b. [COME [BE *x* [√ROOT]]]

Accordingly, the derivation of the morphological causatives forms listed in (7.7) may be illustrated as follows:

(7.11) *SS-causativization of verbs of quality:*



When I dealt with the inchoative form in Chapter 4, I argued that the abstract verbs should be kept separate in the structure in order to account for both. The resulting lexical structure illustrated as (7.11b) for morphological causatives is similar to the one suggested by Guerssel (1986: 81) for the same semantic class of verbs. For instance, Guerssel gives the LCS structure illustrated in (7.12b) below for the morphological causative verb *ss-zyert* 'cause to be long' exemplified in (7.12a), which is derived from the stative verb *zyert* 'be long' exemplified in (7.13a) with its structure given as (7.13b):

(7.12) a. Y-ss-zyert wryaz fuli
3ms.CAUS.be:long:per man:FS string
The man made the string long

b. *ss-zyert*: *y* CAUSE (*x* COME TO BE LONG)

(7.13) a. Y-zyert wfuli
3ms-be.long CS.string
The string is long

b. *zyert*: *x* BE LONG

However, I disagree with Guerssel with respect to the lexical structure ascribed to the intransitive verb *zyert* 'be long' (7.13) that serves as input for the derivation of the causative form (7.12). Guerssel assumes that such a verb has monadic structure composed of the verb BE exclusively, while I argued above that such verb forms are inchoative, and thus have a dyadic structure which contains the verb COME in addition to the stative verb BE (see also the analysis developed in Chapter 4). Discussing the same data as Guerssel's, Lumsden (2000: 204) adopts a similar view holding that the morphological causative form *ss-zyert* in (181a) above contains both the inchoative verb "MOVE", which corresponds to the abstract verb COME in the present work, and the stative verb BE, in addition to the causative abstract verb referred to as AFFECT by Lumsden, and which corresponds to our verb CAUSE in the present work. The structures proposed by Lumsden for the stative form *zyert* 'be long' and the causative form *ss-zyert* 'cause to be long' are illustrated in (7.14a) and (7.14b) respectively below (given as (13b) and (13c) by Lumsden 1995: 204):

(7.14) a. Stative: *y* BE AT [$STATE_i$]

b. Causative: *y* MOVE TO [*y* BE AT [$STATE_i$]]
x AFFECT *y*

Lumsden's causative structure illustrated in (7.14b) is based on the two-tier system proposed by Talmy (1988) and Jackendoff (1990). The verbs MOVE and BE are represented on a Thematic tier indicating change of state, while the verb AFFECT is represented on an Action tier indicating causation. Both in Guerssel's and Lumsden's proposals, the transition from the monadic structure with only the abstract stative verb BE to the

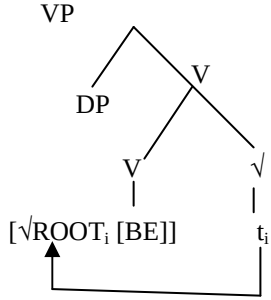
triadic structure with three abstract verbs (BE, COME and CAUSE) is direct. Where does the abstract inchoative component, paraphrased as COME, come from? The fact that the intransitive verb *zyert* 'be long' also yields the inchoative (or change of state) interpretation means that the inchoative component is independent of the causative component, which must be restricted to the verb CAUSE. Therefore, the analysis I proposal above deriving the causative structure from the inchoative rather than from the stative structure is more appropriate.

In the previous chapters I proposed that the abstract verbs BE, COME, ACT and CAUSE encoded in the LS of verbs must be identified lexically by some appropriate morphological material in the syntax, which I formulated as the following constraint:

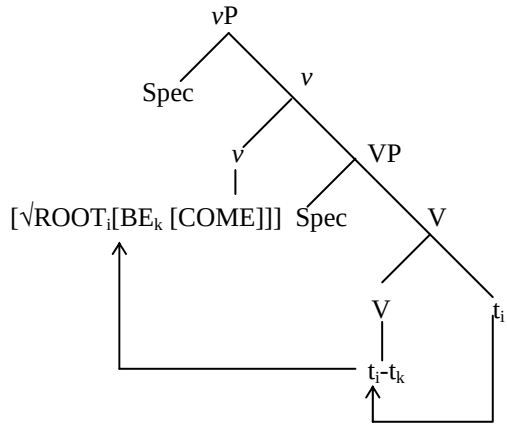
(7.15) *Morphological Constraint*
Abstract verbs encoded in the LCS component of verbs must be identified with lexical content.

Applied to the verbs of quality under discussion, I proposed that the abstract verbs BE and COME are identified (or lexicalized) by the lexical √ROOT subsequent to their conflation as illustrated in (7.16a) and (7.16b) below, respectively:

(7.16) a.



b.

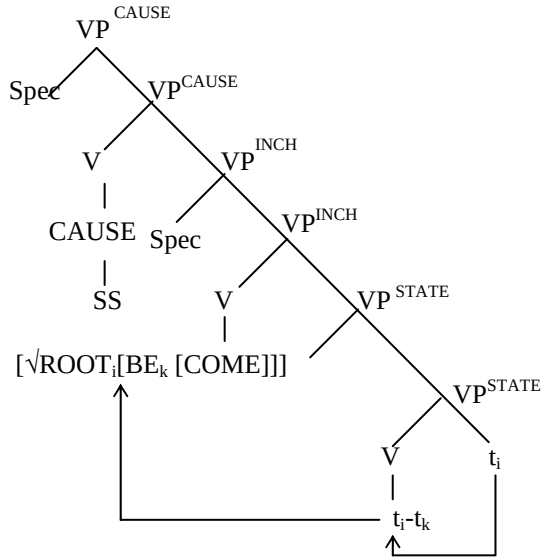


The causative form however contains the morphological morpheme SS which corresponds to the abstract verb CAUSE as illustrated with the verb *ss-ibrik* ‘to cause to become dark / black’ below:

(7.17) *Morphological causatives*

Therefore, unlike the abstract verbs BE and COME which are lexicalised by the lexical ROOT, the abstract verb CAUSE is lexicalised by the causative morpheme *SS* as illustrated below:

(7.18)



As already mentioned at the outset of the present section, the description of morphological causatives derived from inchoative verbs provided so far carries over to the class of unaccusative verbs. I devote the rest of the present section to morphological causatives derived from reflexives disguised as unaccusatives.

7.2.2 Causatives derived from verbs of spatial configuration

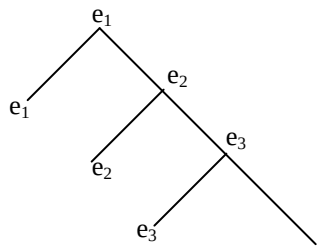
Consider again the morphological causative *ss-*γim 'seat someone / make someone sit' in (7.19b), which is the transitive counterpart of the unaccusative-disguised reflexive *qqim* 'sit down' in (7.19a):

(7.19) a. T-bedd γef ttabla (reflexive)
3sg.f.-stand.perf on table
She stood on the table

b. T-ss-bedd mmi-s γef ttabla (causative)
3fs-CAUS-stand child-her on table
She stood her son on the table

In Chapter 6 I demonstrated that verbs of spatial configuration such as *bedd* 'stand' exemplified in (7.19a) above have the event structure (simplified) and the lexical structure represented in (7.19a) and (7.20b) below, respectively:

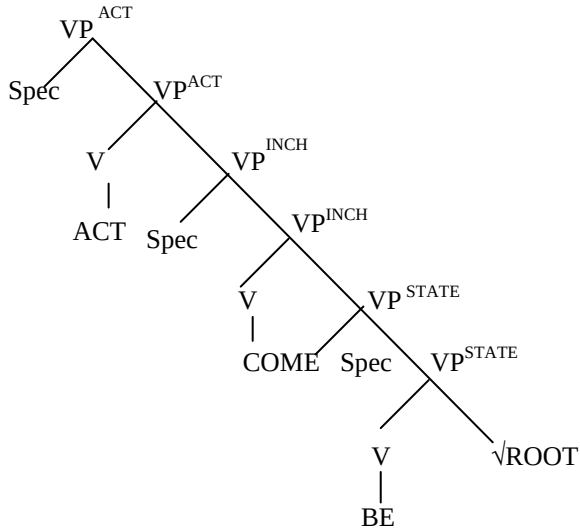
(7.20) a.



b. [ACT [COME [BE ([√ROOT])]]]

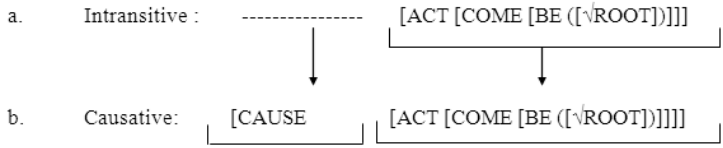
The mapping of the ES and the LS above yields the PAS illustrated in (7.21).

(7.21)



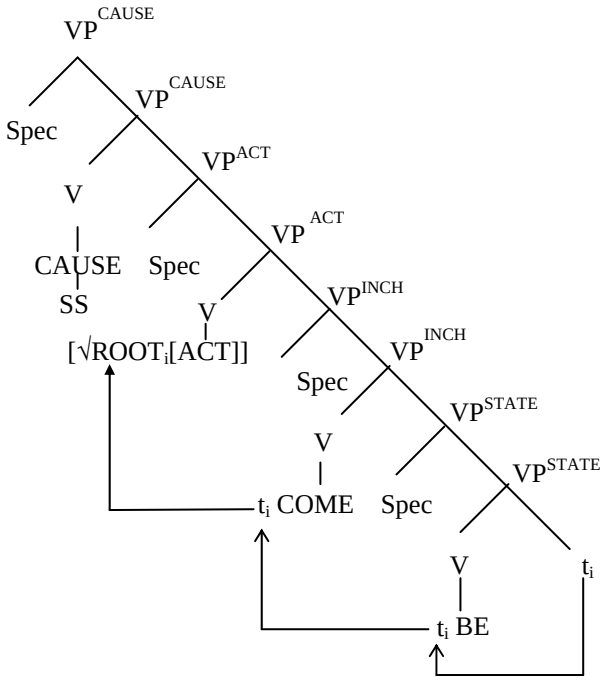
Like in the situation of causatives derived from inchoative verbs dealt with in the previous subsection, the morphological causative verb *ss-bedd* exemplified in (7.19b) is also derived from its intransitive counterpart *bedd*. Accordingly, I illustrate the derivation of the lexical structure corresponding to the causative verb *ss-bedd* as follows:

(7.22) *SS-causativization:*



The abstract verb CAUSE is identified lexically by the causative morpheme SS while the verbs ACT, COME and BE are lexicalised by the lexical root in the same way as argued for in the previous subsection and as illustrated below:

(7.23)



7.2.3 Conclusion

In the derivation process of morphological causatives presented in the present section, I argued that the abstract causative verb CAUSE is lexicalised or identified lexically by means of the causative morpheme SS, while the verbs BE, COME and ACT are lexicalised by means of the lexical ROOT. The question that arises with respect to the structure above is why is the verb CAUSE not identified by the lexical ROOT just like the verbs BE and COME and ACT? What this question amounts to is why in these situations lexical causativization, i.e. without appealing to the causative morpheme, is not possible. This question will be answered in Section 4 where the two strategies applied to lexicalise the verb CAUSE are discussed. Before moving to such a discussion, I have to analyse the structure of lexical causatives first, which is the topic of the next section.

7.3 Intransitive alternating causatives

In the present section I investigate the structure of lexical causatives that alternate with the intransitive use. I argue that their abstract verb CAUSE is lexicalised by means of the lexical √ROOT unlike morphological causatives whose verb CAUSE is lexicalised by means of the causative morpheme SS.

Unlike morphological causatives, the abstract verb CAUSE involved in the structure of lexical causatives is not reflected morphologically as illustrated with the causative verb *ldi* 'open' exemplified in (7.24b):

(7.24) a. Teldi tewwurt (intransitive)
3f.sg.open-perf. cs.door
The door opened / is open

b. Teldi Numide tawwurt (transitive)
3m.sg.open-perf Numide fs.door
Numide opened the door

In the absence of a morphological causative marker likely to identify or lexicalise the abstract verb CAUSE, the question that arises here is how the abstract verb in question is lexicalised, knowing abstract verbs have to be identified with morphological content. To recapitulate, I formulated this constraint in Chapter 3 in the following generalization:

(7.25) *Morphological Constraint*
Abstract verbs encoded in the LCS component of verbs must be identified with lexical content.

Following the constraint above that lexical verbs are possible is by itself ample evidence that the causative abstract verb involved in the structure of such verbs is lexicalised. The second question, akin to the one raised above, is why are such verbs not lexicalised by the causative morpheme SS. In other words, why did the language not develop a new causative morpheme? I would like to argue that the abstract verb CAUSE in question is lexicalised by the lexical √ROOT itself in the same way as argued for with respect to the abstract verbs BE, COME and ACT in the previous chapters, and recalled in Section 2. As will be shown shortly, the proposal will provide an elegant account for the semantic differences between lexical and morphological causatives as highlighted for instance by Guerssel (1986) followed by Lumsden (1995).

In his analysis of verbs of change in Tamazight, Guerssel (1986) argues that lexical causatives such as the verb *crez* 'plough' exemplified in (7.26) indicate 'extrinsic change' while morphological causatives such as the verb *ss-fsy* 'to melt or to cause to melt' exemplified in (7.27) indicate 'intrinsic change'.

(7.26) a. Y-crez wurtu (Guerssel's (136a), p. 79)
3ms.plow cs.orchard
The orchard is plowed

b. Y-cerz weryaz urti (Guerssel's (136b), p. 79)
3ms.plow.perf cs.man orchard
The man plowed the orchard

(7.27) a. Y-fsy wudi (Guerssel's (140a), p. 81)
3ms.melt:perf.butter: cst
The butter melted

b. Y-ss-fsy wryaz udi (Guerssel's (140b), p. 82)
3ms.CAUS.melt:per cs.man butter
The man melted the butter

By 'intrinsic change', Guerssel means that the change of state is somehow determined by a property that is inherent to the object undergoing such a change of state. In the case of the verb *ss-ffsy* 'melt' exemplified in (7.27) for instance, it is the temperature within the butter that determines whether the process of melting takes place or not. Viewed this way, the role of the causer (or external argument) involved with *ss-ffsy* is simply to create conditions triggering such a change. By contrast, Guerssel argues that the 'extrinsic change' that characterizes lexical causatives is caused by factors that are external to the object (internal argument). In other terms, the change is not determined by a factor that is inherent to the object; rather, it is driven by factors that are associated with the causer (the external argument). Given the external 'nature' of the factor causing the change of state associated with lexical causatives, Guerssel concludes that the lexical-conceptual structure of these verbs is basically transitive in the sense that the 'causer' is always present even when left unexpressed as in their intransitive alternate. In the latter case, Guerssel continues, the causer is not projected in the syntax but it is present at the lexical-conceptual level.

Building on the analysis proposed by Guerssel recalled above, Lumsden (1995) argues that the predicate associated with the external argument in the lexical structure representation of lexical causatives is specified lexically with respect to the "manner" or the "means" in which the Causer (external argument) affects the Theme (internal argument). He proposes a lexical representation for lexical causatives whereby the "manner" component is related to the Actor argument as illustrated by the verb *crez* in (7.28) below, to be compared with the one the author proposes for morphological causatives where the "manner" component is related to the Theme argument as illustrated with the verb *ss-fsy* in (7.29). In both representations, the "manner" component is indicated as GESTURE (the reading of Lumsden's structures below is determined by the bracketed system):

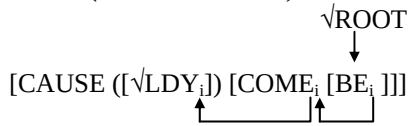
(7.28) Transitive *crez* 'plow'
Causative: *y* MOVE TO [*y* BE AT [$STATE_{CRZ}$]]
[x AFFECT y [$GESTURE_{CRZ}$]] AFFECT y

(7.29) Transitive *ss-fsy* 'melt'
Causative: y MOVE TO [y BE AT [$STATE_{FSY}$]]
x AFFECT [y AFFECT [$GESTURE_{FSY}$]]

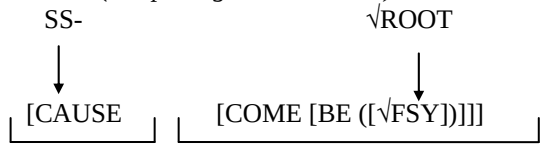
In what follows, I provide an account that handles all the facts mentioned in a way that is coherent with the whole approach adopted in the present dissertation without dispensing altogether with the two-layered system and the extra components called "manner", "means" or "gesture" by Lumsden. Framed within the approach adopted in the present dissertation, Guerssel's idea of "external causation" would mean that the semantics of the verb must be associated with the abstract verb CAUSE as opposed to morphological causatives where the lexical √ROOT is restricted to the two abstract verbs BE and COME seen with respect to. Within the analysis proposed here, semantic features of verbs are conveyed by their lexical roots. Accordingly, given the *Morphological Constraint* adopted in the present work, recalled in (7.25) above, the abstract verb CAUSE involved in the structure of lexical causatives has to be identified or lexicalised by the lexical √ROOT as opposed to the verb CAUSE of morphological causatives, which is lexicalised by the morpheme SS. I henceforth refer to the former type as *√ROOT-lexicalisation* and to the latter type as *SS-lexicalisation.* The *√ROOT-lexicalisation* is illustrated with the verb *ldy*

'to open' in (7.30), to be compared with the *SS-lexicalisation* type illustrated in (7.31) with the verb *ss-fsy* 'melt':

(7.30) *√ROOT-lexicalisation (lexical causatives)*



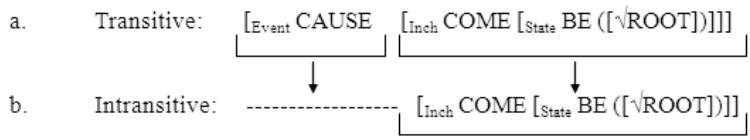
(7.31) *SS-lexicalisation (morphological causatives)*



Viewed from such a perspective, the prediction that lexical causatives should be more lexically specified than morphological causatives does not come as a surprise since lexical √ROOTs are in fact more specified than the causative morpheme SS. Within the analysis proposed here, the "manner" specification highlighted by Lumsden is simply a corollary that results from the successive conflation of the lexical √ROOT with the abstract verbs CAUSE, COME and BE as illustrated in (7.30) above. Likewise, the lack of "manner" specification associated with the causative component of morphological causatives is accounted for bythe insertion of the causative morpheme to lexicalise the abstract verb CAUSE as shown in (7.31).

Within the analysis just proposed, the difference between the causative and the intransitive alternates is also accounted for straightforwardly. When the verb is realised in its intransitive form, the structure illustrated in (7.31) above is reduced to its inchoative component, omitting? the causative component as illustrated below:

(7.32)



The analysis favors the view that such a derivation is obtained at the lexical-conceptual level because that is where the lexical structure is mapped onto the event structure following the model of the organization of the grammar presented in Chapter 3. Unlike lexical structure, event structure is not necessarily represented by a transitive form given that it is not part of the lexical knowledge but construed 'on line' as a result of the mental representation of events as they are seen or experienced in the external world following the definition provided by Jackendoff (1997) as recalled in Chapter 3.

The question as to which of the transitive or the intransitive alternate is derived from the other has concerned many linguists? and has been a concern in the linguistic literature for a while. The different proposals made in the literature diverge on this issue. Without getting into the details, three different views have been assumed. While some linguists argue that such verbs have a basic transitive structure (for instance Guerssel 1986; Labelle 1992; Pustejovsky 1995; Levin and Rappaport 1995; Davis and Demirdache 2000 among many others), others argue for the contrary, considering the intransitive alternate to be basic (Lakoff 1968, 1970; McCawley 1968; Perlmutter 1978; Burzio 1986; Keyser and Roeper 1984; Pesetsky 1995; Hale and Keyser 2002, among many others). Note however that the lexical structure proposed for lexical causatives in (7.30) above does not necessarily favour the intransitive hypothesis as it may be construed as intransitive first. In such a case, the structure corresponding to the intransitive alternate would be derived by stripping the transitive structure by its causative component as illustrated in (7.32) above, which is exactly the reverse of the derivation strategy applied with morphological causatives. Note that although the analysis just provided is formulated in a way that favors the transitive view of causative / unaccusative alternating verbs, the possibility that the derived intransitive structure may have ended up being lexicalised is not to be excluded. In such a case, both the transitive and the intransitive structures shown in (7.31) would be part of the speaker's lexical knowledge as two distinct structures. Should the latter view prevail, the question regarding the direction of the derivation would then become meaningless at the synchronic level, being relevant only when viewed diachronically. Confirming whether this is the case requires further investigation with psycholinguistic techniques such as decision tasks and online tests.

7.4 More on the differences between √ROOT and SS- lexicalisation

Derivation of morphological causatives as explained in Section 2 reveals that the abstract verb CAUSE is lexicalised with the causative morpheme SS as opposed to the rest of the abstract verbs BE, COME of the lower component, which are lexicalised by the √ROOT. By contrast, I argued in the previous subsection that the abstract verb CAUSE involved in the structure of intransitive alternating causatives is lexicalised by the √ROOT.

The difference between *√ROOT-lexicalization*, illustrated in (7.30) above, and *SS-lexicalization*, illustrated in (7.31), has to do with the "amount" of semantic content encoded in the 'causing event'. That is, lexicalization of the verb CAUSE by means of the morpheme SS does not add any extra meaning to it other than the idea of 'triggering' the processes leading to change of state, which is internal or inherent to the object undergoing such a change in the way described by Guerssel (1986) as recalled in the previous subsection. By contrast, lexicalization of the verb CAUSE by means of the lexical √ROOT not only triggers causation but also adds to it lexical content encoded in the √ROOT. This is because the process leading to the change of state is not internal to the object (or the internal argument) but external in the sense that it comes from the subject (external argument). As a matter of fact, this opposition is not restricted to languages with morphological causatives such as Tamazight as we also find it in languages with analytical or periphrastic causatives such as English, as shown with the two sentences below:

(7.33) a. John melted the metal
b. John caused the metal to melt

In (7.33a) the abstract verb CAUSE is lexicalised by the lexical root √MELT in exactly the same way as proposed for the Tamazight alternating causatives in Section 3. By contrast, the verb CAUSE in (7.33b) is lexicalised by the light verb 'cause' in the same way as proposed for the causative morpheme SS of morphological verbs in Tamazight dealt with in section 2, while the lexical root √MELT in (7.33b) is restricted to the RESULT STATE component. The structures corresponding to the English sentences in (7.33a) and (7.33b) are illustrated below as (7.34a) and (7.34b), respectively:

(7.34) a. [CAUSE ([√MELT$_i$]) [BECOME ([t_i]]]

b. ‘cause’

[CAUSE [BECOME ([√MELT])]]

Shibatani and Pardashi (2002: 141) argue that the difference between the English sentences in (7.33a) and (7.33b) corresponds to the one found between direct and indirect causation respectively. Direct and indirect causations have been used with different interpretations in the literature (see Dixon 2000 for a review). The meaning with which they are used by Shibatani and Pardashi (2002) is akin to Guerssel’s (1986) use of “external” and “internal causation” as recalled in Section 3. It is also a proven fact that in English the “causation” involved in lexical causatives is “external” while the one involved in periphrastic causatives is “internal” (see Nedyalkov and Silnitsky 1973; Comrie 1976; Shibatani 1976; Pinker 1989 and Levin and Rappaport 1995 and Shibatani and Pardashi 2002 among others)

7.5 Non-intransitive alternating causatives

In the present subsection I contrast the intransitive-alternating verbs dealt with previously with transitive verbs such as *nɣ* ‘kill’, which lack the intransitive alternate, as shown with the examples in (7.35):

(7.35) a. Y-nɣa wemcic aɣerda
3ms.-kill.perf cs.cat fs.rat
The cat killed the rat

b. *Y-nɣa uɣerda
3ms.-kill.perf cs. rat
*The rat killed

I show that the internal structure associated with the verb *nɣ* ‘kill’differs from the one proposed for the causative verbs dealt with so far in more than one aspect. Whether transitive verbs such as ‘kill’ qualify as causatives or not is a question that has been debated in the literature, and views adopted by their authors diverge (see Shibatani and Pardashi 2002). Pinker (1989: 85) argues that the English verb ‘kill’ is a causative verb. However, he argues such a verb is to be distinguished from other causative verbs involving change of state on the basis of the thematic relation they

specify with their internal arguments. He further argues that verbs such as 'kill' specify an argument that is both Patient and Theme. As we shall see shortly, this thematic distinction has consequences on the internal structure of this type of verb. The fact that the argument is also a Theme means that such verbs involve a RESULT STATE component, which also implies that the object affected undergoes change of state of some sort. Fillmore (1971: 42) for instance proposed that the sentence in (7.36a) below involves a 'resulting state' component that parallels the 'goal component' indicated in (7.36b):

(7.36) a. John killed the rat
b. I pushed the table (into the corner)

In view of the facts just mentioned, it becomes reasonable to suggest at this stage that the difference between intransitive-alternating causatives and non-alternating verbs such as *nγ* 'kill' resides not in the absence vs. the presence of a RESULT component, but in the way such a component is encoded in the lexical structure and, consequently, how its is expressed in the syntax. As a matter of fact, the RESULT STATE involved in non-alternating transitives cannot be expressed independently of the causative interpretation unlike that of intransitive-alternating causatives. In order to highlight this distinction, I indicate the RESULT component associated with the verb *nγ* 'kill' simply as [RESULT STATE] as illustrated in (7.37a) below, as opposed to the representation showing the verbs BE and COME proposed for intransitive-alternating verbs illustrated in (7.37b):

(7.37) a. Non-intransitive alternating causatives:
$[_{Event}$ CAUSE $[_{State}$ RESULT STATE]]

b. Intransitive-alternating causatives
$[_{Event}$ CAUSE $[_{Inch}$ COME $[_{State}$ BE]]]

In all the verb classes dealt with so far in the present dissertation, the motivation behind the use of the abstract verbs BE and COME was on the grounds that the verbs involved yield stative and inchoative interpretations. However, such a view does not apply with non-alternating transitive verbs such as *nγ* 'kill' because they lack the intransitive alternate. There is a direct relation between the type of verbs such as *nγ* 'kill' and their lack of the verbs BE and COME in their structure. The verbs BE and COME are often associated with a Theme argument in the literature, which is distinguished from a Patient argument (see Pinker

1989, Jackendoff 1990, and Rappaport and Levin 1988). Pinker (1989) argues that the verb 'kill' specifies an argument that is both Patient and Theme, which makes different from causative verbs involving a 'pure' Theme argument. This is taken by Pinker as evidence that the verb 'kill' involves the semantics indicated by the abstract verb 'ACT ON', which he relates to direct causation. The fact that the hybrid Theme / Patient relation does not depend on the argument but specified by the verb suggests that the verb involves different semantics from the verbs of change dealt with so far, which specify a pure Theme relation. To make this difference more explicit, I paraphrase the abstract verb involved in the structure of the verb *nγ* 'kill' as ACT ON as opposed to CAUSE. Accordingly, the structure proposed for the verb *nγ* 'kill' in (7.37a) above is reformulated as (7.38a) below, to be compared with the one proposed for alternating causatives in (7.37b), repeated as (7.38b):

(7.38) a. Non-intransitive alternating causatives:
[$_{\text{Event}}$ ACT ON [$_{\text{State}}$ RESULT STATE]]

b. Intransitive-alternating causatives
[$_{\text{Event}}$ CAUSE [$_{\text{Inch}}$ COME [$_{\text{State}}$ BE]]]

Unlike the inchoative subcomponent in (7.38b), which is verbal, the 'RESULT STATE' subcomponent is not verbal but a pragmatic consequence of the action indicated by ACT ON on the object, albeit part of the verb meaning. This consequence is akin to the notion known in formal semantics as "conventional implicature" 2. Accordingly, unlike the structure in (7.38b), the one in (7.38a) does not contain the lexical verb ROOT. Instead, the verb root here merges directly with the abstract verb ACT ON at the lexical structure level. In view of that, the structures given in (7.38a) and (7.38b) may be completed by specifying the place of the lexical root as shown in (7.39a) and (7.39b) below, respectively:

(7.39) a. Non-intransitive alternating causatives:
[$_{\text{Event}}$ ACT ON ([√ROOT] [$_{\text{State}}$ RESULT STATE])]]

b. Intransitive alternating causatives:
[$_{\text{Event}}$ CAUSE ([$_{\text{Event}}$ COME ([$_{\text{State}}$ BE ([√ROOT])])])]

2. The notion of implicature in logic and linguistics was first introduced by Grice 1957, taken up in his numerous subsequent works. It has since then widely been investigated both in logic and in linguistics (see Green 2002 for a review).

The idea that verbs may differ with respect to the realization site of the lexical √ROOT has been defended by Embick (2004) who proposes that √ROOTS may either merge directly with a v-head, forming a complex head, or be generated as the complement of a v-head. Embick (2004: 370) suggests that when the lexical √ROOT merges directly with the v-head the Root "is interpreted as a *means* component; it specifies the means — the nature of the transition event — by which the result state is achieved." By contrast, when the Root is generated as the complement of v-head "[it] is interpreted as the state toward which the transition event denoted by v-[FIENT] moves". Embick refers to the operation forming the complex head as Direct Merge, where "Direct Merge is not a purely structural notion [but] (it is) an operation that has a clear semantic component." (p. 372). To some extent, Embick's Direct Merge of the lexical root with the verb parallels the structure in (7.39a) proposed for intransitive-alternating causatives. Likewise, selection of the lexical root as the complement of *v* parallels the structure (7.39b) proposed for non-intransitive alternating causatives. The two types of lexical structures and the lexicalisations achieved above and in the previous sections with respect to lexical causatives and morphological causatives will help us shed light on the differences regarding causative / intransitive alternation across languages, which is the topic of the next section.

7.6 Causative / intransitive alternation across languages

I now address the question as to why lexical causatives belonging to the same semantic field may alternate in one language but not in another. This situation is illustrated with the verb *bnu* 'build' in (7.40), as compared to its English counterpart *build* exemplified in (7.41):

(7.40) a. Y-bna Aksel axxam (transitive)
3ms.build.perf. Aksel fs.house
Aksel built a house

b. Y-bna wexxam (intransitive)
3ms.build.perf. cs.house
The house is built

(7.41) a. Aksel built up a house
b. *The house built up

With respect to intransitive alternation, the English verb *build*, *cut*, and *plough* behave like the verb *nγ* 'kill' dealt with in the previous section rather than like their Tamazight equivalents, which alternate with intransitive use. Accordingly, I propose that in English such verbs have the lexical structure proposed in (7.39a), while their counterparts in Tamazight have the structure proposed in (7.39b). The reason why such verbs differ across languages with respect to their lexical structure may have to do with principles or rules governing the translation (or expression) of events into linguistic expressions. It has been acknowledged in the literature that causatives that do not alternate in English correspond to those indicating "direct causation" [3]. This corresponds to external causation in the present work. In this case, stating that languages are governed by different rules and principles regarding causation may suffice; but we still need lexical representations reflecting these differences, which is exactly what I have proposed here.

There remains yet one question that needs to be addressed with respect to the lexical structure proposed for non-alternating causatives in (7.39a) above, repeated below:

(7.42) Non-intransitive alternating causatives:
$[_{\text{Event}}$ ACT ON ([√ROOT] $[_{\text{State}}$ RESULT STATE])]]

The question is how the RESULT component to represent is to be expressed on the predicate-argument structure in the syntax. If the result component of the lexical structure is not verbal as argued for in the previous section, then how is it to be expressed? Paul Hirshbühler (p. c.) suggested the possibility that the RESULT component in English may be adjective-like, as opposed to Tamazight where it is verb-like, which would explain why such verbs accept lexical roots in Tamazight but not in English. While such a view may seem convenient for English verbs, it does not work with non-alternating verbs such as *nγ* 'kill' in Tamazight because the language lacks the category adjective[4]. Therefore, to illustrate the difference between the verbs under consideration in Tamazight and in English at the predicate-argument structure level, I indicate the RESULT component as R(ESULT), pending the advent of such a missing category. Accordingly, the predicate argument structure of the Tamazight verbs *bnu*

3. Nedyalkov and Silnitsky (1973); Comrie (1976); Shibatani (1976); Pinker (1989) and Levin and Rappaport (1995) and Shibatani and Pardashi (2002) among others.

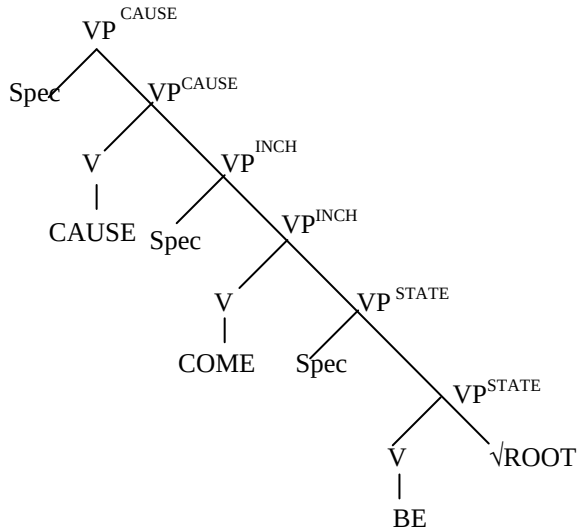
4. What is expressed with adjectives in languages such as English or French is in Tamazight expressed with verbs of quality, or their participial form.

'build', *gzem* 'cut', and *krez* 'plough' will have the predicate-argument structure illustrated in (7.43b) while its English equivalents will have the structure in (7.44b), with their corresponding lexical structures repeated as (7.43a) and (7.44a), respectively, for thesake of convenience:

(7.43) *TI-alternating verbs*:

a. $[_{Event}$ CAUSE $([_{Event}$ COME $([_{State}$ BE $([\sqrt{}ROOT])])])]$

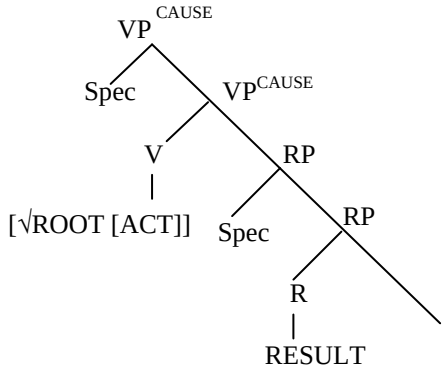
b.



(7.44) *Non-intransitive alternating causatives*:

a. $[_{Event}$ ACT ON $([\sqrt{}ROOT]$ $[_{State}$ RESULT STATE$])]]$

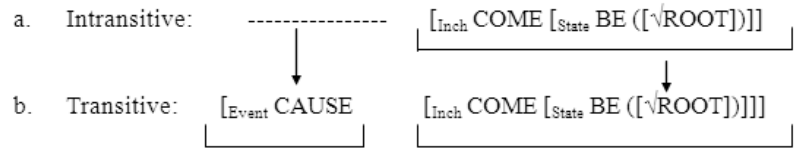
b.



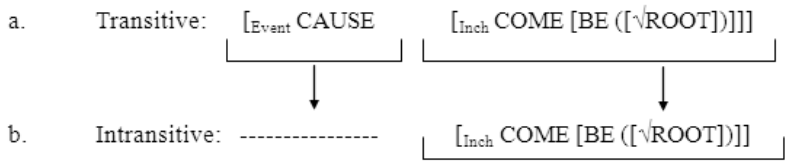
7.7 Conclusion

In the present chapter I have investigated two types of causative verbs of change in Tamazight, which correspond to morphological and lexical causatives. I proposed an analysis based on the lexicalization of abstract verbs. I argued that these two types of causatives differ with respect to two fundamental traits, namely the direction of their derivation, and the way the abstract verb CAUSE of the transitive structure is lexicalized. With respect to the direction of derivation, I proposed in § 2 that the lexical structure of morphological causatives is derived by extending its intransitive counterpart. As far as lexical causatives are concerned, I argued that that the causative structure is basic while sustaining the intransitive alternate to be derived by reduction. I illustrated these two types of derivations as in (7.45) and (7.46) respectively:

(7.45) *Derivation of morphological causatives*



(7.46) *Derivation of lexical causatives*

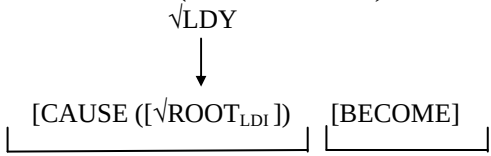


I also suggested that the possibility that both the transitive structure in (7.45b) and the intransitive structure in (7.45a) may have ended up being lexicalised as such, and therefore retrieved directly.

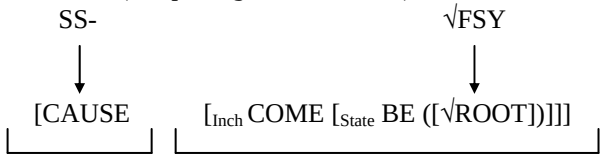
I further argued that morphological causatives (§ 2) and lexical causatives (§ 3) differ in the way the abstract verb CAUSE is lexicalized. More specifically, I demonstrated that the verb CAUSE involved in the structure of lexical causatives is lexicalized by means of the lexical

ROOT. Alternatively, the verb CAUSE of morphological causatives is not lexicalized by the lexical ROOT of the verb but by inserting the causative morpheme SS. I illustrated these two different lexicalisation strategies applied to lexical and morphological causatives as shown in (7.47) and (7.48), respectively:

(7.47) *√ROOT-lexicalisation (lexical causatives)*



(7.48) *SS-lexicalisation (morphological causatives)*



Intransitive-alternating causatives were contrasted with non-alternating causatives such as *nnγ* 'kill' in Section 5. I argued that the lexical structures associated with these two types of verbs differ with respect to the higher verb and their RESULT component involved. While the RESULT component associated with alternating verbs contains the lexical verbs BE and COME, which makes conflation of a lexical root possible, the RESULT component belonging to non-alternating causatives does not contain such abstract verbs, which makes the insertion of the lexical root impossible. The two structures proposed for these two types of verbs were generalized in Section 6 in order to account for the difference between causative verbs across languages. These causative verbs behave differently with respect to intransitive alternation even though they belong to the same semantic class.

CHAPTER EIGHT

CONCLUSION

8.1 Introduction

In the previous chapters I provided a new way of looking at the internal structure of verbs and the organization of the grammar. This approach captures the differences between the various verb classes indicating state and change of state in Tamazight in a coherent manner, and also explains some differences observed across languages with respect to causative and intransitive alternation. This approach has also a number of theoretical consequences on the structure of verbs in general. In this concluding chapter I first highlight the main ideas and proposals developed and defended in the previous chapters, starting with those whose theoretical scope is general (§ 2), before moving to those specific to the Tamazight data (§ 3). In § 4 I return to the question of aspect mentioned in the introduction and explain why I did not consider it to be part of the internal structure as viewed in the present dissertation.

8.2 Theoretically relevant proposals

Among the major facts underlying the originality of the approach proposed are the model of the organization of the grammar and the versatility of the lexical √ROOT within the lexical structure of verbs. Within the model of the organisation of the grammar, internal structure is viewed as composed of two distinct structures, which correspond to event structure and lexical structure. Event structure is seen as a mental representation of non-linguistic facts as we see them or experience them in the external world. Their structure is then represented at the lexical-conceptual level for linguistic purposes. Lexical structure on the other hand corresponds to the linguistic knowledge of the speaker, which is grammaticalized at the lexical level. Using the inchoative structure for illustration, the internal structure in (8.1a) is thus composed of the event structure illustrated in (8.1b), and the lexical structure illustrated in (8.1c):

(8.1) a. [$_{Event}$ COME [$_{State}$ BE ([√ROOT])]]]
b. [Event [State]]
c. [COME [BE ([√ROOT])]]]

The internal structure determines the projection of the Predicate-Argument Structure (PAS henceforth) in the syntax. Within such a view of the organisation of the grammar, lexical structure, event structure and predicate-argument structure cease to be confused with one another in the way often observed in the literature (as noted in Chapter 3). The versatility of the lexical √ROOT on the other hand makes it possible for abstract verbs or verb functions such as those paraphrased as BE, CAUSE, ACT, and COME / BECOME to be lexicalised by conflation, thus accounting for the different interpretations associated either with the same verb form, or with different verbs including statives, inchoatives, unaccusatives, verbs of spatial configuration and causatives as illustrated below:

(8.2) a. Stative
[$_{State}$ BE ([√ROOT])]]]

b. Inchoative / unaccusative
[$_{Event}$ COME [$_{State}$ BE ([√ROOT])]]]

c. Verbs of spatial configuration
[$_{Event}$ ACT [$_{Event}$ COME [$_{State}$ BE ([√ROOT])]]]

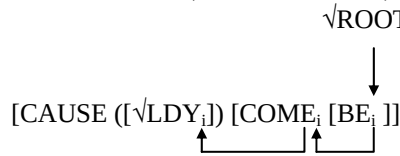
d. Causative
[$_{Event}$ CAUSE [$_{Event}$ COME [$_{State}$ BE ([√ROOT])]]]

Moreover, I argued that two types of lexicalisation strategies are applied to causative verbs in Tamazight, thus accounting uniformly and straightforwardly for the semantic and morphological differences between morphological and lexical causatives. To recapitulate, from the semantic point of view, lexical causatives refer to change of state brought about by factors that are external to the object, while morphological causatives refer to change that is somehow brought about by the properties that are inherent to the object (although triggered by external factors). That is, while the abstract verb CAUSE involved in the structure of lexical causatives such as the *ldi* 'open' exemplified in (8.3b) is lexicalised with the √ROOT as shown in (8.3c) below, the verb CAUSE involved with morphological causatives such as the one exemplified in (8.4b) is lexicalised by means of the causative morpheme SS as illustrated in (8.4c):

(8.3) a. Teldi tewwurt
3F.Sg.open-PERF cs.door
The door opened / is open

b. Teldi Tanite tawwurt
3M.Sg.open-PERF Tanite fs.door
Tanite opened the door

c. *√ROOT-lexicalisation (lexical causatives)*



(8.4) a. Taawej tsarut
3f.s.bend-perf cs.key
The key is bent

b. I-ss-aawej Aksel tasarut
3m.s.CAUS-bend-perf Aksel fs.key
Aksel distorted the key

c. *SS-lexicalisation (morphological causatives)*

I related the difference between the two types of lexicalisation to the amount of semantic content that has to be specified by the abstract verb CAUSE. The causative component of lexical causatives specifies the change of state indicated in addition to its causation, while the causative component of morphological causatives specifies only the causation. The change of state is conveyed by the RESULT component, hence the restriction of the lexical √ROOT to the verbs BE and COME, while the verb CAUSE is caused by the morpheme SS. I further argued that the same approach also explains the differences between intransitive alternating and non-alternating causatives, be it within one particular language or across languages. With alternating causatives, the √ROOT

lexicalises the abstract verbs of the RESULT component in addition to the verb CAUSE, while in the situation of non-alternating causatives the √ROOT lexicalises only the verb CAUSE. Based on differences related to the thematic interpretation of the internal argument between proposed in the literature, I further proposed that the causative component of non-alternating causatives is very likely to correspond to the verb AFFECT than CAUSE. This difference provides evidence for the distinction between the RESULT components as recalled above. I illustrated the structures proposed for intransitive alternating and non-alternating causatives as shown in (8.5a) and (8.5b), respectively:

(8.5) a. $[_{Event}$ CAUSE [COME [BE ([√ROOT])]]]

b. $[_{Event}$ AFFECT ([√ROOT]) [RESULT STATE]]

8.3 Verbs of (change of) state in Tamazight

8.3.1 Verbs of quality

Verbs of quality**,** dealt with in Chapter 4, have the particularity to occur with accusative clitics when they indicate a pure state, and with nominative clitics when they indicate resultative state or change of state depending on the context. I argued that the accusative form, which indicates a pure state, has a monadic structure illustrated in (8.6a) while the nominative form, which indicates resultative state or change of state, has the dyadic structure illustrated in (8.6b) which it shares with unaccusative verbs.

(8.1) a. $[_{State}$ BE ([√ROOT])]]]

b. $[_{Event}$ COME $[_{State}$ BE ([√ROOT])]]]

To distinguish between the resultative state and the change of state interpretations associated with the inchoative structure in (8.6b) given for the nominative form, I argued that its syntactic structure contains an operator with two different scope options, following an idea proposed by Diesing (1992); Kratzer (1995); Chierchia (1995) among others, to distinguish between stage-level and individual-level predicates. I argued that such verbs yield the change of state interpretation when the operator has scope over the higher verb COME in their structure; but a stative (or resultative) interpretation the scope of the operator is restricted to the

lower verb BE. I addressed the cross-dialect morphological difference taken by inchoative (or nominative) form verbs of quality. I argued that such a difference reflects another deeper difference, which is aspectual. More specifically, one type of aspect, which I called stative, selects the abstract V^{BE} in the syntax as in Tashelhiyt Tamazight, while the other, which I called non-stative, selects the verb V^{COME} as in Taqbaylit (Kabyle) Tamazight.

The accusative and the nominative clitics were dealt with more thoroughly in Chapter 5. There I argued that the clitic is the pronominal expression of the internal argument in both situations. However, the accusative clitic is realized as a suffix because it does not raise to the subject position due to the category T involved which is defective as opposed to the non-defective category T involved in the nominative form, hence the raising of the clitic to the subject position where it surfaces as a prefix with the nominative Case. In view of that, I demonstrated that the accusative clitic is in Aspect while the nominative clitic is in the spec of Comp. In both situations the verb stem is in C, which accounts for the accusative suffix status in one case and the nominative prefix status in the other.

8.3.2 Unaccusative verbs

Unlike verbs of quality, unaccusative verbs lack accusative form, i.e. the possibility to occur with accusative clitics. I accounted for this on the basis of the fact that their semantic content does not refer to an inherent property or state but to a property resulting from a change of state undergone by the (internal) argument. Apart from this detail, unaccusative verbs and verbs of quality, in their inchoative or nominative form, behave alike. I further divided the class of unaccusative verbs into two subclasses depending on whether the change indicated is internally caused or whether it is externally caused, following the analysis proposed by Guerssel (1986) for Tamazight verbs of change. I argued that externally caused unaccusatives have a transitive basic structure, which means that the intransitive structure is derived by reducing the causative structure as opposed to externally caused causatives whose structure is basically intransitive. These two types of unuaccusatives further contrast on the basis of the way their causative counterparts are derived. This latter topic is dealt with in Chapter 7, which is dedicated to causative verbs of change.

8.3.3 Verbs of spatial configuration

The class of inchoative and unaccusative verbs are contrasted in Chapter 6 with another class of intransitive verbs, called verbs of spatial configuration, such as *qqim* 'sit', *bedd* 'stand', *kker* 'stand up', *knu* 'lean, bend', etc. I argued that such verbs are semantically and syntactically reflexive even though theylack a reflexive morphologywhich make them look like unaccusative verbs. On the basis of the three different interpretations associated with this class of verbs, which correspond to the stative, the inchoative and the reflexive, I argued that such verbs possess the triadic internal structure illustrated below:

(8.7) $[_{\text{Event}}$ ACT $[_{\text{Inch}}$ BECOME ([√ROOT])]]]

I accounted for the stative and the inchoative interpretations in the same way as was proposed for unaccusatives and inchoatives, while accounting for the agentive interpretation by raising the clitic argument to the spec of ACT. On the other hand, I argued that verbs of spatial configuration are semantically reflexive because the argument is associated with two different thematic roles, one of which corresponds to the Agent in the Spec of ACT, and the other which corresponds to the Theme in the specifier of the verb COME. The two thematic roles form a thematic chain with an argument. Such an analysis draws support from the idea well-established in the literature that reflexives have two thematic roles but only one argument.

8.3.4 Causative verbs

As mentioned with respect to the different classes unaccusative verbs, the class of causative verbs in Tamazight is split into two sub-classes based on morphological and semantic criteria. Morphological causatives are derived from unaccusatives indicating "internal change" by prefixing the causative morpheme SS to their base. By contrast, lexical causatives, which indicate external change, are basically transitive. I argued that the verb CAUSE involved with morphological causatives is lexicalised by the causative morpheme SS, while the one involved with lexical causatives is lexicalised by means of the lexical ROOT. These two types of lexicalisation strategies provided explain in a straightforward manner the semantic differences between these two classes as highlighted by Guerssel (1986), which is namely why verbs indicating external cause lack a causative morpheme

while those indicating internal causation display the causative morpheme SS.

Lexical causatives with an intransitive alternate were contrasted with those lacking the intransitive alternate. I argued that the lexical structures associated with these two types of verbs differ with respect to the composition of their RESULT components. While the RESULT component associated with alternating verbs is composed of the lexical verbs BE and COME and the lexical ROOT, the one associated with non-alternating causatives does not contain abstract verbs, which makes the insertion of the lexical root impossible. The two structures just mentioned also accounted for the difference observed across languages regarding the possibility for some lexical causatives to alternate in some languages but not in others, even though they belong to the same semantic class.

8.4 Aspect and internal structure

In the present section I explain why I did not consider aspectual structure as part of the internal structure of verbs presented in the previous chapters. Before starting the discussion, let me clarify that when dealing with the internal structure of events, the type of aspect referred to corresponds to the one called *lexical aspect* in the linguistic literature (also called situation aspect by Smith 1991), and which refers to temporal properties such as duration, instantaneity and telicity. It is different from the one called *grammatical aspect* (also called viewpoint aspect by Smith 1991), which indicate whether an event is viewed as terminated (perfective) or as non-terminated (imperfective).

8.4.1 Aspectual structure

Aspectual structure has often been quoted as being part of the internal structure of verbs. As a matter of fact, aspectual structure is even at the origin of the idea that verbs have an internal structure, following the works by Vendler (1957, 1967), based on earlier works including Ryle (1949) and Kenny (1963). As already recalled in Chapter 3, Vendler (1967) proposed a new classification based on time relevant semantic criteria such as *duration*, *instantaneity* and *delimitation*, which he called "time schemata". Accordingly, he proposed a classification which ranks verbs into four major aspectual classes called *state*, *activity*, *accomplishment*, and *achievement*. Vendler's main claim is that tense considerations "are not merely limited to the obvious discrimination between past, present and future (…) The use of a verb may also suggest the particular way in which

that verb presupposes and involves the notion of time." (p. 97). In his view, a verb may have more than one schema, and the more schemata it has, the more divergent readings it offers. He then argues that such different readings are easily accounted for when the schemata involved are individually taken into consideration using time adverbials such as *in*-phrase and *for*-phrase as diagnostic tests. Accomplishments and achievements are compatible with *in*-phrase but not with *for*-phrase time adverbials as illustrated in (8.8) and (8.9) respectively. Activities and states, on the other hand, are compatible with *for*-phrase time adverbials but not with *in*-phrase time adverbials as illustrated respectively in (8.10) and (8.11).

(8.8) How long did it take to draw the circle? (accomplishment)
*For how long did he draw the circle?
He drew the circle in twenty seconds.
It took him twenty minutes to draw the circle.

(8.9) At what time did you reach the top? (achievement)
*For how long did you reach the top?
At noon sharp / in less than a minute.

(8.10) For how long did he push the cart? (activity)
* How long did it take to push the cart?
He was pushing the cart for half an hour.

(8.11) For how long did you love her ? (state)
*At what time did you love her?
For three years.

The criteria above as well as the diagnostic tests proposed by Vendler were largely adopted by modern linguists in their aspectual classification of verbs and events. However, Vendler was also aware that time alone does not explain these differences when he acknowledged that "other factors like the presence or absence of an object, conditions, intended state of affairs, also enter the picture." (*ibid*). For instance, a verb such as *walk* which is of the activity type becomes an accomplishment verb when it occurs with a locative destination or an adverb of extent (Dowty 1979: 60) as shown below:

(8.12) a. John walked a mile / to the park
b. John walked a mile / to the park in an hour
c. It took John an hour to walk a mile / to the park
d. John finished walking to the park

On the basis of the facts just mentioned, many linguists rejected Vendler's original analysis, arguing instead that aspectuality is not a property verbs but of sentences (see for instance Verkuyl 1972, 1989, 1993, 2000).

8.4.2 Aspect and internal structure

In the analysis of internal structure proposed in the present dissertation, only event structure and lexical structure are considered, excluding aspectual structure. The reason I gave then is because only one criterion, namely telicity, is relevant to the verb classes investigated in the present work. Before elaborating on telicity, let me first explain why the other criteria are irrelevant.

8.4.2.1 Instantaneity and duration

Instantaneity distinguishes achievement verbs such as 'hear', 'find', 'win', etc, from activity verbs such as 'listen', 'look', 'discover', etc, which indicate events occurring on a longer period of time. In the present dissertation, no such distinction is needed because activity verbs are not part of the verbs investigated.

Duration on the other hand distinguishes achievement verbs from accomplishment verbs such as 'write a letter', 'draw a circle', etc. In the analysis presented in the previous chapters, no distinction is made between achievement and accomplishment verbs, both of which indicate change of state. As a matter of fact, some linguists propose to merge these two subclasses into one class, referred to as *Transition* verbs by Pustejovsky (1991, 1995). Moreover, such a distinction on the basis of duration may easily be captured by considering event structure. Consider, for instance, the pair of sentences below both of which involve the verb type, a dichotomy often cited in the literature (for instance by Verkuyel 1993):

(8.13) a. He typed the letter P
b. He typed a thirty-page document

The same verb type is used in the examples above. However, while in (8.13a) it is interpreted as an achievement because the indicated event is non-durative and instantaneous, it is interpreted as an accomplishment in (8.13b) because the indicated event is durative. Here we somehow run into a vicious circle. If we admit that the difference resides in the nature of the events indicated, then one can always argue that such a nature is precisely what is aspectual with events, which is not untrue. What is of importance to our discussion here is the fact that the contrast between the two examples in (8.13) provides evidence that aspect is neither a lexical nor syntactic property, but eventual. The same can be said regarding the situations often cited in the literature in favor of the syntactic analysis of aspect (see Verkuyl op. cit.)1. For instance, verbs such as 'sing' or 'drink' are of the activity type, but become accomplishment verbs when they are delimited by a complement as in 'sing a song' or 'drink a beer'. Again, it is more reasonable to consider such a property to stem from the nature of the event, rather than ascribing it to VP in the syntax. Within the analysis provided here, VP, which is part of the argument structure, is simply the syntactic counterpart of the internal structure. Obviously, more needs to be said regarding the way aspect is encoded within events and a wide range of examples needs to be considered. For that reason, Iwill leave this to future research.

8.4.2.2 Telicity

The *in*-phrase and *for*-phrase time adverbials introduced by Vendler (op. cit.) to determine whether an event is of the accomplishment / achievement type, or the of the activity types (see above) also indicate whether an event is telic or atelic, respectively.

Telicity is a property that refers to the final state of events. As recalled in Chapter 3, the class of telic verbs (Aristotle's *kineseis* verbs), contrast with the class atelic verbs (Aristotle's *energiai* verbs), which do not contain such a property. With the verb classes investigated in the dissertation, telicity is indicated by the change of state into which the event indicated by the verb culminates. Consequently, the notion of telicity is inherent to event structure, delimited by the lower component called RESULT. Therefore, event structure suffices for this purpose, and no

1. For arguments in favor of a syntactic view of aspect see Verkuyl (1972, 1989, 1993, 2000) and Tenny (1987). For counterarguments to Verkuyl's view see Rothstein (2004) Tenny (1994) admits that Aspect forms an intersection between Semantics and Syntax. Similarly, van Hoot (2000) argues that telicity is involved at all levels, the lexical, the semantic and the syntactic.

appeal to an extra structure is necessary. However, like in the previous situation, how such aspect is encoded in event structure is a matter of future research.

REFERENCES

Abush, D. (1985). *On Verbs and Time*. Doctoral Dissertation. University of Massachusetts at Amherst.

Achab, K. (2001). "Changement morphosyntaxique en berbère", *Cahiers Linguistiques d'Ottawa*, 29, Mai, 2001

—. (2003). "Alternation of state in Berber", in Jacqueline Lecarme (ed.) *Research in Afroasiatic Grammar II*. Amsterdam: John Benjamins.

—. (2005). "Le genre et son origine en berbère et dans les langues chamito-sémitiques », in A. Lonnet & A. Mettouchi (eds) Faits de Langues 26, numéro spécial intitulé Les Langues Chamito-Sémitiques (afro-asiatiques), Paris.

Alboiu, G., M. Barrie and C. Frigeni (2004). "SE and the unaccusative / ergative paradox". *Proceedings from the 2002 CLA Conference* , 7-14, UQAM Press

Allaoua, A. (1986). *Description Linguistique d'un Parler de Petite Kabylie (Ayt- Ziyan*).Doctoral dissertation, University of Copenhague.

Alsina, A. (1996). *The Role of Argument Strcture in Grammar*. CSLI Publications

Aoun, J. & A. Benmamoun, (1998). "Minimality, reconstruction and PF movement." *Linguistic Inquiry*, 569-597. MIT Press. Massachusetts Institute of Technology.

Baker, M., K. Johnson, I. Roberts (1989) "Passive arguments raised." *Linguistic Inquiry, 20*, 219–52.

Barss, A. (1986). *Chains and Anaphoric Dependence*. Doctoral Dissertation. MIT.

Basset, A. (1936), Atlas linguistique des parlers berbères, Alger, Institut d'Études Orientales, (1936 et 1939), [+ cartes].

Benfey, T. (1869). *Geschichte der Sprachwissenchaft und Orientalisch Philologie in Deutschland*, Munich, J. G. Cotta

Benua, L. and H. Borer, (1996). "The Passive/Anti-Passive Alternation." Paper presented at GLOW 1996, Athens, Greece.

Brett, M. and E. Fentress, 1996. *The Berbers*. Blackwell Publishers, Inc, Oxford.

Booij, G. (1992). "Morphology, semantics & argument structure", in ROCA A.G., *Thematic Structure : its Role in Grammar*, Foris.

Borer, H. (1994). "The projection of arguments", in E. Benedicto and J. Runner (eds.) *Functional Projections*, University of Massachusetts Occasional Papers 17. 19-47. GLSA, Amherst MA.

—. (1996). "Passive without theta grids", in P. Farell & S. Lapoint (Eds.), *Morphological Interfaces* (pp. 60-99). Stanford, CA: CSLI

Bouchard D. (1984). *On the Content of Empty Catgories*. Foris, Dordrecht

Brousseau, A.-M. and E. Ritter (1991). "A non-unified analysis of agentive verbs." *Proceedings of the 10th West Coast Conference on Formal Linguistics*, Stanford,CA: Center for the Study of Language and Information, pp. 53-65.

Burzio, L. (1981) *Intransitive Verbs and Italian Auxiliaries.* Doctoral dissertation.MIT, Cambridge, Mass.

—. (1986) *Italian Syntax: A Government-Binding Approach*, Reidel, Dordrecht. Camps, G. (1983). Comment la Berbérie est devenue le Maghreb Arabe. *Revue de l'Occident musulman et de la Méditerranée, n°35* : 7-24 Aix-en-Provence.

Camps, G. (1995). *Les Berbères. Mémoire et Identité*. Paris. Éditions Errance.

Caplice, R. (1983). *Introduction to Akkadian*. Rome: Biblical Institute Press.

Chabot, J.B. (1940). Recueil des inscriptions libyques, Imprimerie Nationale, Paris.

Chaker, S. & Hachi, S. (2000) "Etudes berbères et chamito-sémitiques", Mélanges offerts à Karl-G. Prasse, (S. Chaker, éd.), Paris/Louvain, Editions Peeters, 2000, p. 95-111.

Chierchia G. (1989). "A Semantics for Unaccusatives and its Syntactic Consequences." Ms. Cornell University.

—. (1995) "Individual-level predicates as inherent Generics." In: G. N. Carlson & F. J. Pelletier (eds), *The Generic Book.* Chicago, London: The University of Chicago Press, 176-223

—. (2004), "A semantics for unaccusatives and its syntactic consequences."In: Alexiadou, Anagnostopoulou, and Everaert (eds), *The Unaccusativity Puzzle: Explorations at the Syntax-Lexicon Interface*, Oxford, 22–59.

Chomsky, N. (1981). *Lectures on Governmnet and Binding*. Dordrecht: Foris

—. (1995). *The Minimalist Program*. Cambridge, Mass. MIT Press.

—. (2000). "Minimalist inquiries: The framework.", in Robert Martin, David Michaels and Juan Uriagereka (eds), *Step by Step: Essays in Minimalist Syntax in Honor of Howard Lasnik*, edited by 89-155. Cambridge, MA: The MIT Press, 2000.

—. (2001) "Derivation by phase." *MIT Occasional Papers in Linguistics, 18*. Cambridge, MA.

Cohen, D. (1963), L*e Dialecte Harabe (Hassānīya) de Mauritanie*, Paris, Klincksieck.

—. (1988a). "Introduction". In: Jean Perrot & David Cohen (eds). *Les langues dans le Monde Ancien et Moderne* : *Langues Chamito-Sémitiques* Paris. Centre National de la Recherche Scientifique (CNRS), pp. 1-8.

—. (1988b). "Chamito-Sémitique". In: Jean Perrot & David Cohen (eds). *Les langues dans le Monde Ancien et Moderne* : *Langues Chamito-Sémitiques* Paris. Centre National de la Recherche Scientifique (CNRS), pp. 9-30.

Comrie, D. (1976). "The syntax of causative constructions: cross-language similarities and divergences. In: Masayoshi Shibatani (Ed.), *Syntax and Semantics, Volume 6: The Grammar of Causative Constructions* (pp. 261-312). New York: Academic Press

Courtois, Ch. (1942). "De Rome à l'islam", *Revue africain*e. 86, pp. 24-55.

Culicover, P. W. and W. Wilkins. (1986). "Control, PRO and the projection principle," *Language*, 62: 12-153.

Demirdache, H. and H. Davis, (2000). "On lexical verb meanings: evidence from Salish*."* In J. Pustejovsky and C. Tenny (Eds.) *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. CSLI: Stanford University Press, 97-142.

D'Alessandro, R. 2001 "On impersonal *si* constructions in Italian" in Marjo van Koppen, Joanna sio and Mark de Vos (Eds.), *Proceedings of Console X*, Leiden.

Diesing, D. (1992). *Indefinites*. Cambridge, Mass: MIT Press.

Dobrovie-Sorin, C. 1998. "Types of predicates and the representation of existential readings" *Proceedings of SALT*, Stanford, April 1997. Cornell University Press

Diesing, M. (1992). *Indefinites*. Cambridge, Mass: MIT Press.

Dowty, D. (1979). *Word Meaning and Montague Grammar*. Dordrecht, Reidel.

Dixon, R.M.W (2000) "A typology of causatives: Form, syntax and meaning". In: R.M.W Dixon and Alexandra Aikhenvald (Eds) *ChangingValency*.30-83. Cambridge: Cambridge University Press.

Embick, D. (2000). "Syntax and Categories: Verbs and Participles in the Latin Perfect", *Linguistic Inquiry 31:2*, 185-230.

—. (2004) "On the Structure of Resultative Participles." *Linguistic Inquiry 35:3*, 355–392. Fontana, J. M. and J. Moore. (1992). "VP-Internal

subjects and SE-reflexivisation in Spanish", *Linguistic Inquiry* 23: 501-510.

Fevrier, J.G. (1956). "Que savons-nous du libyque" ? *Revue Africaine*, 100, pp. 263-273.

—. (1959). *Histoire de l'écriture*, Paris ; " Ecritures libyques et ibériques ", pp. 321-332.

Camps, G., 1996 : "Ecritures - Ecriture libyque", *Encyclopédie berbère* XVII : 2564-2573.

Galand, L. (1969). "Types d'expansion nominale". *Cahiers Ferdinand de Saussure 25*, 83-100.

—. (1980). Une integration laborieuse: les verbes de qualité du berbère. *Bulletin de la Société Linguistique de Paris* 75, 347-62.

—. (1990). "Du nom au verbe d'état: témoignage du berbère" In : Hans Mukarovsky (Ed.) *Proceedings of the Fifth International Hamito-Semitic Congress*. Viena.

Galand, L. (1999), *Lettres au Marabout. Messages touaregs au Père de Foucauld*. Paris, Belin.

Gautier, F. (1937). *Le passé de l'Afrique du Nord*. Paris : Payot.

Green, M. S. (2002*) "Review of* implicature: intention, convention, and principle". In: Wayne A. Davis (Ed.) *The failure of Gricean Theory*. Philosophy and Phenomenological Research, 65, 241–4

Greenberg, J. (1950). "Studies in African linguistic classification: IV. Hamito-Semitic."*Southwestern Journal of Anthropology* 6.47-63.

Grice, H. P. (1957) "Meaning". *Philosophical Review*, 66, 377–88

Grimshaw. J. (1982). "On the lexical representation of romance reflexive clitics." In: Joan Bresnan (Ed.) *The Mental Representation of Grammatical Relations*. Cambridge, MA/London: MIT Press. 87-148.

—. (1990). *Argument Struc*ture. Cambridge. Mass.: MIT Press.

—. (1993). *Semantic structure and semantic content in lexical representation*. Rutgers University, New Brunswick.

Guerssel, M. 1986. *On berber verbs of Change : a Study on Transitivity Alternations*. Cambridge. (Mass.): MIT.

—. 1987. "The status of lexical category preposition in Berber: implication for the nature of construct state". In Guerssel, M. & Hale, K. (Eds.) *Studies in Berber syntax, MIT Lexicon Project Working Papers 14*.

Guerssel, M. (1992a). "On the case system in Berber". *The Canadian Journal of Linguistics* 37,113-299.

—. (1992b). "The Phonology of Berber Derivational Morphology by Affixation". *Lingustic Analysis, 22 (1-2)* : 3-60

—. (1995). "Berber clitic doubling and syntactic extraction" , *Revue Québecoise de Linguistique* 24, 112-33

—. (1995). “Berber clitic doubling and syntactic extraction.” *Revue Québecoise de Linguistique* 24, 112-33.

Haiman, J. (1985). *Natural Syntax*. Cambridge: Cambridge University Press.

Hale, Kenneth. 1986. “Notes on world view and semantic categories: some Warlpiri examples” pp.233-254 (Chapter 8) in *Features and Projections*, ed. by Peter Muysken & Henk van Riemsdijk. Dordrecht: Foris. 2000

Hale, K. and J. Keyser (1998). “The basic elements of argument structure.” Papers from the UPenn/MIT Roundtable on Argument Structure and Aspect. H. Harley. Cambridge, MA, MIT Working Papers in Linguistics. 32: 73-119.

Hale, K. and Keyser, S. J. (2002). *Prolegomena to a Theory of Argument Structure*. Cambridge, Mass.: MIT Press.

Hale, K. and S. J. Keyser (1986). *Some Transitivity Alternations in English. Lexicon Project Working Papers 7*. Center for Cognitive Science, MIT

Hale, K. and S. Keyser (1987); “A View from the Middle.” *Lexicon Project Working Papers 10*. Center for Cognitive Science, MIT, Cambridge, Mass.

Hale, K. and M. Laughren (1983). "Preface to Dictionary Entries of Verbs." MIT, Cambridge, MA. Halle, M. & A. Marantz. (1993). “Distributed morphology and the pieces of inflection”. In K. Hale & S.J. Kayser (eds), *The view from Building 20*, MIT Press, Cambridge.

Herodotus. *The Histories* (English translation, revised edition 2003). London: Penguin Books.

Hornstein, N. (1984) *Logic as Grammar: An Approach to Meaning in Natural Language*. MIT Press, Cambridge, MA.

—. (1999). “Movement and control,” *Linguistic Inquiry*, 30: 69-96. .

—. (2001). *Move! A Minimalist Theory of Construal*. Oxford: Blackwell.

Hayward, R. J. (2000). “Afroasiatic” In: Bernd Heine & Derek Nurse (Ed.) *African languages: an introduction*, pp. 74-98. Cambridge University Press.

Haiman, J. (1985). *Natural Syntax*. Cambridge: Cambridge University Press

Ibn Khaldoun, A. (translated by De Slane in 1840) *Histoire des Berbères et des dynasties musulmanes de l'Afrique septentrionale*. New Edition 1999. Paris : Les Geuthner.

Jackendoff, R. S. (1983). *Semantics and Cognition*. Cambridge, MA, MIT Press.

—. (1990). *Semantic Structures*. Cambridge, MA, MIT Press. Syntax and Semantics 26: Syntax and the Lexicon. T. Stowell and E. Wehrli. New York, Academic Press: 155-178.

—. (1997). The architecture of the language faculty. Cambridge, Mass.,MIT Press.

Julien, C.-A. (1951). *Histoire de l'Afrique du Nord des Origines à 1830*. Paris : Payot. Kayne, R. (1988). "Romance *se* / *si*", *GLOW* newsletter 20.

Kayne, R. (1990). "Romance clitics and PRO", *Proceedings of the 20th Annual Meeting of NELS*, CLSA, Univ. of Massachusetts, Amherst.

—. (1991) "Romance Clitics, Verb Movement, and PRO." *Linguistic Inquiry* 22, 647-686.

Keenan, E. L. (1987). *Universal Grammar: 15 Essays*. London: Croom Helm.

Kenny, A. (1963), *Action, Emotion and Will*, London: Routledge and Kegan Paul.

Keyser, S. and T. Roeper (1984). "On the middle and ergative constructions inEnglish." *Linguistic Inquiry* 15:381-416.

Kornfilt, J. (1985). *Case Marking, Agreement and Empty Categories in Turkish*. PhD Diss. Harvard University.

Kratzer, (2004), "Building resultatives". In: Maienborn and Wöllstein-Leisten (Eds.) *Event Arguments in Syntax, Semantics, and Discourse*, Tübingen

Kratzer, A. (1993). "On external arguments". In: E. Benedicto and J. Runner (Eds) *Functional Projections*. Amherst, MA, Graduate Students Linguistic Association, University of Massachusetts at Amherst: 103-130.

—. (1995). "Stage-level and individual level predicates". In: G. N. Carlson and F. J. Pelletier. *The Generic Book*. Chicago, University of Chicago Press: 125-175.

Labelle, M. (1992). M. (1992). "Change of state and valency." *Journal of Linguistics 28*, 375-414.

Lahrouchi, M. (2003). "Manifestations gabaritiques dans la morphologie verbale du berbère Tachelhit." *Recherches Linguistiques de Vincennes*, 32 : 61-82. Paris.

Lakoff, G. (1968). "Some verbs of change and causation." In *Mathematical Linguistics and Automatic Translation*. In: S. Kuno. (Ed.) Report NSF-20, Aiken Computation Laboratory, Harvard University, Cambridge, Mass.

—. (1970) “Pronominalization, negation and the analysis of adverbs”. In: Jacobs, R. and P. Rosenbaum (Eds.) *Readings in English transformational grammar,* 145-165, Ginn & Co, Waltham, MA.

Levin, B. and M. Rappaport. (1986). “The formation of adjectival passives” *Linguistic Inquiry 17*, 623-663.

Levin, B. and M. Rappaport Hovav. (1994) “A preliminary analysis of causative verbs in English", *Lingua* 92, 35-77.

Levin, B. and M. R. Hovav. (1995). *Unaccusativity: At the Syntax-Lexical Semantics Interface*. Cambridge, MA, MIT Press.

Levin, B. and M. Rappaport. (1996). “Lexical semantics and syntactic structure”. In: S. Lappin (Ed.) *The Handbook of Contemporary Semantic Theory,* Blackwell, Oxford, 487-507.

Levin, B. and M. Rappaport Hovav (1999) “Two structures for compositionally derived events”, *Proceedings of SALT 9,* Cornell Linguistics Circle Publications, Cornell University, Ithaca, NY, 199-223. (25 pages, postscript)

Lumsden, J. S. (1995 and U. Shlonsky (Eds.) *Research in Afroasiatic Grammar. Papers from the Third conference on A*). “Cause, manner and means in Berber change of state Verbs”. In: J. Lecarme, J. Lowenstamm *froasiatic Languages*, Antipolis Sophia, 1996.

Marantz, A. (1984). *On the Nature of Grammatical Relations,* Cambridge, Mass., MIT Press

Marantz, A. (1997). “No escape from syntax: don‘t try to do morphological analysis in the privacy of your own lexicon”, *Penn Working Papers in Linguistics* 4.2.

Marçais, W. (1938). “Comment l’Afrique du Nord a été arabisée”. *Annales de l’Institut d’ Études Orientales d’Alger*, vol. IV, 1938, pp. 1-2, and vol. XIV, 1956, pp. 6-17.

Marcais, G. (1946). *La Berberie Musulmane et l'Orient au Moyen Age*. Paris : Aubier.

McCawley, J. (1968). “Lexical insertion in a grammar without Deep Structure”. In: B.J. Darden, C.-J.N. Bailey, and A. Davison (Eds.) *Papers From the Fourth Regional Meeting of the Chicago Linguistic Society*, Chicago.

—. 1973, “Syntactic and logical Arguments for Semantic Structures”. In: Farjimura O. (Ed.) *Three dimensions in Linguistic Theory*. Tokyo: TEC Corp. pp. 259-376.

McGinnis. M. (1997). “Reflexive and the specifiers of *v*P.” In: L. Pylkkänen, H. Harley, & A. van Hout (Eds.) *Papers from the UPenn/MIT Round Table on the Lexicon,* MIT Working Papers in Linguistics 35: 137–160

Nash, L. and A. Rouveret. (1999). “Proxy categories in phrase structure. Ms. University Paris 8.

Nedyalkov, V. P. and G. G. Silnitsky (1973). “The typology of morphological and lexical causatives.” In: F. Kiefer (Ed.), *Trends in Soviet theoretical linguistics*. pp. 1-32. Dordrecht: Reidel.

Noyer, R. (1992). Fe*atures, Positions, and Affixes in Autonomous Morphological Structure*. PhD thesis, MIT, Cambridge, Mass.

Ouerdane, A. (1992). Reedition 2003. Les Berbères face à l'arabo-islamisme en Algérie, Montreal, Éd. KMSA,

Ouhalla, J. (1993). “Subject-extraction, negation and the anti-agreement effect.” *Natural Language & Linguistic Theory* 11: 477-518

—. (1994). *Introducing Transformational Grammar. From Principles and Parameters to Minimalism.* London/Sydney/Auckland: Arnold

—. (2005, to appear). Agreement, Anti-agreement and the EPP. *Natural Language and Linguistic Theory 23.3*: 655-686.

Perlmutter, D. (1978). “Impersonal passives and the unaccusative hypothesis”, *Berkley Linguistics Society 4*. 157-89.

Pesetsky, D. (1995). *Zero Syntax: Experiencers and Cascades*. Cambridge, MA, The MIT Press.

Prasse, K., 1974, *Manuel de Grammaire touarègue (tahaggart*), VI-VIII, *Verbe* Copenhague : Akademisk Forlag.

Pinker, S. (1989). *Learnability and cognition: The acquisition of argument structure*. Cambridge, MA, MIT Press.

Pustejovsky, J. (1988). “The Geometry of Events.” In: C. Tenny (Ed.), *Generative Approaches to Aspect. Lexicon Project Working Papers 24*, MIT Press, Cambridge.

—. (1991). The syntax of event structure. *Cognition 41*: 47-81.

—. (1995). *The Generative Lexicon*. Cambridge, MA, The MIT Press.

Rappaport, M., B. Levin, and M. Laughren (1993) “Levels of lexical representation'”, in J. Pustejovsky, ed. (1993) *Semantics and the Lexicon*, Kluwer, Dordrecht, 37-54.

Rappaport Hovav, M. and B. Levin. (1996). “Two types of derived accomplishments'” in M. Butt and T.H. King (Eds.), *Proceedings of the First LFG Conference*, 375-388.

Rappaport, M., M. Laughren and B. Levin (1993). “Levels of lexical representation.” In: J. Pustejovsky (Ed.), *Semantics and the Lexicon*. Dordrecht, Kluwer Academic Publishers.

Rappaport Hovav, M. and B. Levin (1998) “Building verb meanings”. In: M. Butt and W. Geuder (Eds.), *The Projection of Arguments: Lexical and Compositional Factors*, CSLI Publications, Stanford, CA, 97-134.

Reinhart, T. 1991. “Lexical properties of ergativity.” Paper presented at the Workshop on Lexical Specification and Lexical Insertion, Research Institute for Language and Speech, University of Utrecht.

—. (1996). “Syntactic effects of lexical operations: reflexives and unaccusatives”. *OTS Working Papers in Linguistics*.

Reinhart, T. and T. Siloni. (1999). “Against the unaccusative analysis of reflexives”. Ms., later published In Alexiadou, A., E. Anagnostopoulou, and M. Everaert M, *The Unaccusative Puzzle: Explorations of the Syntax-Lexicon Interface*. Oxford: Oxford University Press.

Reinhart, T. (2002). “The theta system - an overview.” *Theoretical Linguistics* 28. 3.

Reinhart, T. and E. Reuland (1993) “Reflexivity”, *Linguistic Inquiry* 24.4, 657-720.

Reinhart, T. and T. Siloni. (2005). “The lexicon-syntax parameter: reflexivization and other arity operations”, *Linguistic Inquiry* 36, 3.

Ritter, E. and S. Rosen. 2000. “Event structure and ergativity” In Tenny, C. and J. Pustejovsky (eds.) *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*. Stanford. Leland Stanford Junior University, CSLI Publications

Reinhart, T. (1990). “Self representation”, updated draft of a lecture delivered at Princeton conference on anaphora, October 1990.

—. (1996), “Syntactic effects of lexical operations: Reflexives and Unaccusatives", *OTS working papers*.

Roeper, T. (1981). “On the deductive model and the acquisition of productive morphology. In Baker, C. and J. MacCarthy (eds.) *The Logical Problem of Language Acquisition* Cambridge, MA.: MIT Press.

Renan, E. (1855). *Histoire générale et systèmes comparés des langues sémitiques*. Paris.

Rizzi, L. (1986). “On Chain Formation”. In H. Borer (Ed.) *Syntax and Semantics* 19: *The Grammar of Pronominal Clitics*, New York: Academic Press.

Rosen, S. (1989). *Argument Structure and Complex Predicates*. PhD thesis, Brandeis University.

Ryle, G. (1949). *The Concept of Mind*. London. Hutchinson’s University Library.

Shibatani, M. (1976). “The grammar of causative constructions: a conspectus.” In Masayoshi Shibatani (Ed.) *Syntax and Semantics VI: the grammar of causative constructions*, pp. 1–42. New York: Academic Press.

Shibatani M. and P. Pardeshi 2002). "The causative continuum". In M. Shibatani (Ed.). *The Grammar of Causation and Interpersonal Manipulation*. Amsterdam: John Benjamins, pp. 85-126.

Smith, C. (1991). *The Parameter Aspect*. Dordrecht: Kluwer

Sportiche, D. (1998). *Partitions and Atoms of Clause Structure: Subjects, agreement, case and clitics*, Routledge

Stowell, T. (1981) *Origins of Phrase structure. PhD* dissertation, MIT.

Talmy, L. (1985). "Lexicalisation patterns : semantic structure in lexical forms". In: T. Shopen (Ed.) *Language Typology and Syntactic Description*, vol. 3, 56-149.

—. (1988). "Force dynamics in language and cognition." *Cognitive Science, 12*: 49-100.

—. (2000). *Toward a Cognitive Semantics*, Vols I and II. Cambridge, MA: The MIT Press Tenny, C. (1987).*Grammaticalizing Aspect and Affectedness*. Doctoral Dissertation, MIT.

Tenny, C. (1994). *Aspectual Roles and the Syntax Semantics Interface.* Dordrecht. Kluwer Academic Press

Travis, L. (1992). "Inner Tense with NP: The Position with Number". In *1992 Annual Conference of the Canadian Linguistics Association*, pages 329-345. University of Toronto Working Papers in Linguistics.

—. (2000). "Event structure in syntax." In Tenny, C. and J. Pustejovsky. (Eds.), *Events as Grammatical Objects: The Converging Perspectives of Lexical Semantics and Syntax*, 145-185. Stanford, CA: CSLI Publications.

Tenny, C. and J. Pustejovsky. (2000). "A history of events in linguistic theory." In Tenny, C. and J. Pustejovsky (Eds.) *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax.* Stanford. Leland Stanford Junior University, CSLI Publications

van Hout, A. (2000). Event semantics in the lexicon-syntax interface." In Tenny, C. and J. Pustejovsky (Eds.) *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax.* Stanford. Leland Stanford Junior University, CSLI Publications

van Voorst, J. G. (1988). *Event Structure*. Amsterdam / Philadelphia: John Benjamins.

Vendler, Z. (1957). "Verbs and times." *The Philosophical Review, LXVI*: 143-160

—. 1967. "Verbs and times." In: Z. Vendler (Ed), *Linguistics in Philosophy*, Ithaca, Cornell University Press, New York.

Verkuyl, H. (1972). *On the Compositional Nature of the Aspects*. Dordrecht: Reidel.

—. (1989). “Aspectual classes and aspectual composition”, *Linguisitcs and Philosophy 12*, 39-94.
—. (1993). *A Theory of Aspectuality : The Interaction between Temporal and Atemporal Structure*, Cambridge: Cambridge UP.
—. (2000). “Events as dividuals: aspectual composition and event semantics”. In Higginbotham, J., F. Pianesi, A.C. Varzi (Eds.) *Speaking of Events*, New York/Oxford: Oxford University Press.
Von Wright, G. H. (1963). *Norm and Action: a Logical Inquiry*. London: Routledge and Kegan Paul.
—. (1968). *Essay in Deontic Logic and the General Theory of Action*, Amsterdam: North Holland.
Wehrli, E. (1986) “On some properties of French clitic SE”, in H. Borer (Ed.) *The Syntax of Pronominal Clitics*, 263-283. San Francisco: Academic Press.
Zubizaretta, M.-L. (1987). *Levels of Representation in the Lexicon and in the Syntax*, Foris: Dordrecht.
Williams, E. (1981). “Argument Structure and Morphology.” *The Linguistic Review 1*, 81-114.

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